

# EVALUATING THE ROLE OF FERC IN A CHANGING ENERGY LANDSCAPE

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## HEARING BEFORE THE SUBCOMMITTEE ON ENERGY AND POWER OF THE COMMITTEE ON ENERGY AND COMMERCE HOUSE OF REPRESENTATIVES ONE HUNDRED THIRTEENTH CONGRESS FIRST SESSION

DECEMBER 5, 2013

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## **EVALUATING THE ROLE OF FERC IN A CHANGING ENERGY LANDSCAPE**

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**THURSDAY, DECEMBER 5, 2013**

HOUSE OF REPRESENTATIVES,  
SUBCOMMITTEE ON ENERGY AND POWER,  
COMMITTEE ON ENERGY AND COMMERCE,  
*Washington, DC.*

The subcommittee met, pursuant to call, at 9:34 a.m., in room 2123, Rayburn House Office Building, Hon. Ed Whitfield (chairman of the subcommittee) presiding.

Members present: Representatives Whitfield, Hall, Shimkus, Pitts, Terry, Burgess, Latta, Olson, McKinley, Gardner, Kinzinger, Griffith, Barton, Upton (ex officio), McNerney, Tonko, Engel, Green, Barrow, Matsui, Christensen, Castor, and Waxman (ex officio).

Staff present: Nick Abraham, Legislative Clerk; Charlotte Baker, Press Secretary; Ray Baum, Senior Policy Advisor/Director of Coalitions; Sean Bonyun, Communications Director; Allison Busbee, Policy Coordinator, Energy and Power; Patrick Currier, Counsel, Energy and Power; Tom Hassenboehler, Chief Counsel, Energy and Power; Jason Knox, Counsel, Energy and Power; Ben Lieberman, Counsel, Energy and Power; Brandon Mooney, Professional Staff Member; Chris Sarley, Policy Coordinator, Environment and the Economy; Tom Wilbur, Digital Media Advisor; Jeff Baran, Democratic Senior Counsel; Greg Dotson, Democratic Staff Director, Energy and the Environment; Caitlin Haberman, Democratic Policy Analyst; Elizabeth Letter, Democratic Press Secretary.

### **OPENING STATEMENT OF HON. ED WHITFIELD, A REPRESENTATIVE IN CONGRESS FROM THE COMMONWEALTH OF KENTUCKY**

Mr. WHITFIELD. I would like to call the hearing to order this morning. We are going to be evaluating the role of FERC in a changing energy landscape. And I am delighted that the Commissioners of FERC are with us today. We appreciate very much your being here. I certainly initially would like to congratulate Cheryl LaFleur, who has been appointed the Acting Chair of FERC.

And I enjoyed our meeting yesterday, Ms. LaFleur, and we look forward to working with you on the many issues facing our country as we adjust to this changing landscape that we all are very much involved in.

I would say that I think the transcending issue that sort of encompasses everything that we are talking about today does relate to the changing landscape of energy in America. With this low-

priced natural gas we see a transformation from coal to natural gas. Many States, and this administration particularly, are being very aggressive in trying to increase the amount of electricity produced from renewables as they try to address climate change.

And I would say that as we move forward, and I think you all particularly have to be sensitive to this, is that frequently many people in the administration and other groups point to Europe as a model for America. And yet in Europe 22 percent of electricity is now being produced from renewables. They have an overcapacity of electricity in Europe. And as a result they have very low wholesale prices, which is good, but their residential rates and their manufacturing rates are the highest in the world because of renewable surcharges.

And so what is happening over there is they are trying to make this transition too quickly, in my view, and that is what people are trying to do in America as well. But what is happening over there is that the utilities, the baseload utilities have lost, like, \$800 million in market valuation over the last 15 months or so. And so as you go to renewables and you have to place more emphasis on distribution at the local levels, there is not enough capital in the utility industry there to meet those needs. And so they have a real conflict in Europe right now.

And interestingly enough, they have mothballed 30 gigawatts of plants producing electricity from natural gas in Europe because of the high cost of natural gas coming out of Russia, and we had our largest export market of coal last year in recent memory and the Europeans took 45 percent of that, because when Germany closed down their nuclear power plants, they realized—and other countries over there realized—they have to use some coal.

And so this administration, who talks all the time about all-of-the-above policy, is in effect in their greenhouse gas rules going to prohibit even the option of building a new coal-powered plant in the future. So if we are going to talk about an all-of-the-above policy and say that is our policy, then that should be the policy.

And so we have introduced legislation. We don't expect anybody to build a new coal-powered plant right now with natural gas prices this low, but in the future, like in Europe what they are discovering, it should be an option. And so I look forward to the testimony of the Commissioners today to get some of their views on the many challenges facing us.

And I look forward to your comments, Mr. Norris. I know you made a comment recently in a smart grid conference in November about your personal view is we don't really maybe need anymore infrastructure for natural gas and fossil fuels. I may be wrong, but I think you made that comment. And many of us would disagree with that, particularly with the additional fields that we have. And the Northeast talks to us all the time about not having the infrastructure to get the gas to where it needs to be.

But we all recognize that we have a lot of challenges, and we can't meet those challenges unless we work together to meet them. And we are going to continue to provide an alternative view to this administration, particularly in the area of energy, where we think that there are serious disagreements and with dire consequences that are possible.

[The prepared statement of Mr. Whitfield follows:]

PREPARED STATEMENT OF HON. ED WHITFIELD

Today's hearing is entitled, "Evaluating the Role of FERC in a Changing Energy Landscape." Let me begin by first expressing my congratulations to the Honorable Cheryl LaFleur, who was recently named Acting FERC Chairman. Welcome Chairman LaFleur, and welcome to the other Commissioners.

Today provides us the opportunity to consider the legal and regulatory authorities of the Federal Energy Regulatory Commission (FERC) and evaluate the manner in which FERC carries out its statutory duties under the Federal Power Act, the Natural Gas Act, and other authorities. FERC is tasked with regulating the interstate transmission of natural gas, oil, and electricity. FERC also is responsible for evaluating proposals to build LNG terminals and interstate natural gas pipelines, as well as the licensing of nonfederal hydropower projects. FERC also oversees the reliability of the electric grid.

The reliability of the grid is of particular interest to me given the dramatic shift we are experiencing in the electric generation portfolio. Much of this shift has been driven by the vast amounts of natural gas that are being developed. But this shift also is being driven in large part by the EPA's new and proposed regulations aimed at prohibiting the use of coal to produce electricity. So I have serious concerns regarding how the president's policies directly aimed at trying to bankrupt the coal industry will impact grid reliability, fuel diversity, and electricity prices for families and businesses. Given FERC's role in overseeing the reliability of the grid, I am very interested in understanding what impacts FERC believes will result from the elimination of a significant portion of affordable and reliable baseload generation.

I am also concerned with FERC's implementation of Order No. 1000—FERC's rule on Federal transmission planning and cost allocation. Some of FERC's initial compliance orders conflict with FERC's statements before this subcommittee that it would be flexible and respect regional differences while implementing Order 1000. And I continue to have concerns that Order 1000 will, to the detriment of ratepayers, allow for the broad socialization of costs to pay for transmission lines that will carry expensive wind energy to load centers, even when the economic or reliability benefits will be minimal.

Finally, with respect to organized wholesale electricity markets, the committee stands ready to work with FERC as it continues to examine ways to improve the functioning of such markets to ensure consumers will continue to receive reliable electricity at affordable rates.

The sectors and industries regulated by FERC comprise a substantial portion of the U.S. economy and infrastructure, so it is critical that FERC carry out its statutory duties independently and effectively, and do so in a manner that will help facilitate our new era of energy abundance.

Mr. WHITFIELD. So with that, at this time I would like to recognize the gentleman from California, Mr. McNerney, for his 5-minute opening statement.

**OPENING STATEMENT OF HON. JERRY MCNERNEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. MCNERNEY. I certainly thank the chairman for calling this hearing today, and it is an real opportunity for us to have all the Commissioners in front of us. So I want to thank you for coming out here today. This is an area that I have a lot of passion for and a good background in.

As we know, FERC has broad jurisdiction over the electricity and natural gas markets, such as setting electricity and transmission rates, overseeing regional transition organizations, such as the one we have in California. It is now time to make some important decisions about our Nation's energy infrastructure and FERC will be an essential component of that decision-making process.

Efforts to increase renewable energy production, growth of natural gas, and the need to ensure a secure grid will all be critical issues. In fact, there is no shortage of issues to discuss, including what defines the public interest with natural gas exports, licensing LNG export facilities, licensing natural gas pipelines, smart grid innovation, renewable energy, to name only a few.

States such as California are implementing aggressive renewable portfolio standards, and there is a need to ensure grid stability. It is becoming increasingly important that we have an energy infrastructure that is capable of meeting these demands.

Our energy infrastructure needs cyber and physical protections. Threats to our grid are real, and transitioning to smart grids presents both an opportunity and a threat to grid security. The Energy Policy Act of 2005 made significant progress, providing FERC with the authority to oversee power grid and to establish critical infrastructure protections. However, more needs to be done to protect the grid. The Energy Policy Act focused on bulk power systems, which can exclude some transmission local distribution and other grid facilities.

I think it is worth exploring FERC's role in the grid, an area of increasing innovation and technical developments. These are areas which we can improve upon, such as response during emergency situations and addressing potential improvements to critical grid infrastructure protection initiatives.

FERC's coordination with the North American Electric Reliability Corporation—a little bit of an mouthful there—or NERC, regarding standards and reliability, such as those related to cybersecurity, remain a high priority for me.

Lastly, we must analyze these challenges in the context of climate change, a serious threat to our Nation on several levels that has been acknowledged by scientists as well as leaders at the Pentagon. Combined, these issues will dictate how we are able to manage and respond to rapidly changing energy technology, as well as managing supply and demand in the markets.

At this point, I would like to yield to my colleague from Texas, Mr. Green.

**OPENING STATEMENT OF HON. GENE GREEN, A  
REPRESENTATIVE IN CONGRESS FROM THE STATE OF TEXAS**

Mr. GREEN. Thank you Mr. Chairman, and thank my ranking member for yielding to me and allowing me to speak.

Today, our witnesses will discuss issues that face our country now and in the future, including grid security, gas-electric coordination, electricity transmission and infrastructure permitting.

It is important to note that Texas is the face of the changing energy landscape. In Texas we have demand for energy that is growing exponentially. We have grid issues that threaten our economic growth, we have infrastructure needs for market delivery and power generation. We must coordinate and balance all these challenges with the resources necessary to overcome them. Wind power and natural gas offer Texas a way to clear all these obstacles.

Additionally, our domestic supplies allow us to meet not only our challenges, but those of our neighbors. But this, too, must be addressed correctly.



Last month, we held a hearing on H.R. 3301, the North American Energy Infrastructure Act. At the hearing, FERC was concerned about H.R. 3301 with the effect of their ability to comply with section 3 and section 7 of the Natural Gas Act. I think after initial misreadings, we want to emphasize that FERC's section 3 and section 7 authority remain in place. In fact, H.R. 3301 provides FERC additional authority by eliminating the Presidential permit process, creating a regulatory structure within the Commission, and gives FERC the ability to approve the import or export of natural gas across national boundaries.

I think many members of this subcommittee have confidence in FERC's pipeline permitting ability, and H.R. 3301 is an example of that. And I look forward to discussing all these issues today at the hearing, and thank our witnesses for being here, and again thank my ranking member for yielding to me. I yield back my time.

Mr. WHITFIELD. The gentleman yields back.

At this time I recognize the chairman of the full committee, Mr. Upton of Michigan, for 5 minutes.

**OPENING STATEMENT OF HON. FRED UPTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN**

Mr. UPTON. Well, thank you Mr. Chairman.

America's energy picture is rapidly changing and America's energy regulators have got to keep pace. Long held beliefs in American energy scarcity have given way to a new era of energy abundance, especially in regards to oil and natural gas, but many policies and attitudes are still rooted in the outdated assumptions of shortages and rising imports, with the potential to obstruct the opportunities before us, and FERC is in the middle of many of those debates.

For example, America's new abundance of oil and natural gas requires new infrastructure to meet demands and keep prices affordable. And we have got to build this architecture of abundance quickly, given that America's oil and gas output has been rising every year and is straining the existing infrastructure.

But nearly every new project is met with stiff resistance at every step of the process. Opponents are enabled by an archaic Federal regulatory process that can be manipulated to cause years of delays for pipelines, power lines, LNG export projects, and in some cases can block them outright. And while the process at FERC generally works well, there is always room for improvement.

Canada, Australia, and most EU nations have deadlines for their environmental regulatory agencies to act. Why shouldn't the U.S. hold our agencies to a similar standard?

Congress has been active to keep pace with the new energy landscape. The House recently passed H.R. 1900, a bipartisan bill that creates more accountability for the natural gas pipeline approval process. We will soon be considering other infrastructure projects as well, including a bill that I have coauthored with my friend Gene Green to bring more certainty to energy projects that cross our border with Canada or Mexico to help create a more robust and self-sufficient North American energy market.

American energy holds tremendous potential for millions of jobs and for affordable energy prices for everyone from homeowners to

small businesses, certainly to manufacturers, too. And the U.S. is always the proud global leader in the safe and responsible development of our resources. The prospect of LNG exports not only means jobs in the U.S., but also means improved relations with our allies and trading partners and enhanced standing around the globe. But none of these benefits can be achieved if America's energy is choked off by red tape, which is precisely why we are examining the uncertain FERC policies today.

I look forward to working with the Acting Chair and all of the Commissioners before the committee. I look forward to a constructive and productive dialogue and process as we move into next year and the years beyond.

And I would yield time—anyone to our side needing time? If not, I yield back the balance of my time.

[The prepared statement of Mr. Upton follows:]

#### PREPARED STATEMENT OF HON. FRED UPTON

America's energy picture is rapidly changing, and America's energy regulators must keep pace. Long-held beliefs in American energy scarcity have given way to a new era of energy abundance, especially in regards to oil and natural gas. But many policies and attitudes are still rooted in the outdated assumptions of shortages and rising imports, with the potential to obstruct the opportunities before us. And FERC is in the middle of many of these debates.

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But nearly every new project is met with stiff resistance at every step of the process. Opponents are enabled by an archaic Federal regulatory process that can be manipulated to cause years of delays for pipeline, power line, and LNG export projects, and in some cases can block them outright. While the process at FERC generally works well, there is room for improvement. Canada, Australia, and most European Union nations have deadlines for their environmental regulatory agencies to act; why shouldn't the U.S. hold our agencies to a similar standard?

Congress has been active to keep pace with the new energy landscape. The House recently passed H.R. 1900, a bipartisan bill that creates more accountability for the natural gas pipeline approval process. We will soon be considering other infrastructure measures as well, including a bill I have co-authored with Gene Green to bring more certainty to energy projects that cross our border with Canada or Mexico to help create a more robust and self-sufficient North American energy market.

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But none of these benefits can be achieved if America's energy is choked off by red tape, which is precisely why we are examining certain FERC policies today.

I look forward to working with the commission and welcome Acting Chairwoman LaFleur and all of the Commissioners before the committee. I look forward to a constructive dialogue and process as we move into 2014 and the years ahead.

Mr. WHITFIELD. The chairman yields back the balance of his time.

At this time, I recognize the gentleman from California, Mr. Waxman, for 5 minutes.

**OPENING STATEMENT OF HON. HENRY A. WAXMAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF CALIFORNIA**

Mr. WAXMAN. Thank you very much, Mr. Chairman.

I would like to thank each of the Commissioners for being here today, and I want to congratulate Ms. LaFleur on her new role as Acting Chairman.

The Federal Energy Regulatory Commission has a broad range of important issues before it, from renewable energy integration and electric transmission modernization to hydropower licensing and enforcement actions to prevent energy market manipulation. But I want to focus on an issue that has not gotten enough attention during this Congress, and that is grid security.

The Nation's critical infrastructure and defense installations simply cannot function without electricity. Yet, it is clear that the electric grid is not adequately protected from physical or cyber attacks. And these are not theoretical concerns. Just this April, there was an actual attack on our electricity infrastructure. This was an unprecedented and sophisticated attack on an electric grid substation using military-style weapons for the attack. Communications were disrupted. The attack inflicted substantial damage. It took weeks to replace damaged parts.

Under slightly different conditions, there could have been a serious power outage or worse, and the FBI and others are investigating this attack. So as not to harm any ongoing investigation, I won't disclose details of the incident, but I have been in touch with the FBI, and they are willing to provide the members of this committee with a briefing on the very real threat that attacks like this pose to our critical infrastructure. And I hope the chairman will work with me to get that briefing scheduled quickly so that members can get the facts.

The April attack is hardly the only threat facing the grid. A few months ago in Arkansas there were multiple attacks on power lines and grid infrastructure that led to millions of dollars in damage and brief power outages. Independent engineers also recently discovered a new cyber vulnerability in the software used by many electric grid control systems.

We rely on an industry organization to develop reliability standards for the electric grid through a protracted, consensus-based process. FERC lacks authority to directly address these threats and vulnerabilities. And that is incredible. FERC lacks the authority to address these threats. Congress needs to fix this gap in regulatory authority.

In 2010, the bipartisan GRID Act would have provided FERC with the necessary authority. There was a bipartisan consensus that national security required us to act. That bill was reported out of the Energy and Commerce Committee by a vote of 47-0, and then it passed the full House by voice vote. However, the Senate did not act on this legislation.

Mr. Chairman, we have worked on this issue in a bipartisan way in the past and we should be able to do so again. We need to give FERC important new authorities like the authority to take action to protect the grid in emergencies. This is a national security issue

that deserves our attention. We should act now while there is still time to protect against successful attacks.

Thank you, Mr. Chairman, for this chance to make the opening statement. I look forward to the testimony of the members of the Regulatory Commission and to an opportunity to engage them in questions. Yield back my time. Any other member on our side wishes me to yield a minute? No. Yield back.

Mr. WHITFIELD. The gentleman yields back. So that concludes the opening statements. So at this time I would be recognizing each one of you for your 5-minute opening statement. And all of you are skilled witnesses and you know that our little lights, red, yellow, and green, what they mean. So the only reason I mention that is that we are expecting some votes on the floor sometime this morning, and I am hoping that we will have an opportunity to go way down the road before that happens.

So, Ms. LaFleur, you are recognized for 5 minutes for an opening statement. Thank you.

**STATEMENTS OF CHERYL A. LAFLEUR, ACTING CHAIRMAN, FEDERAL ENERGY REGULATORY COMMISSION; PHILIP D. MOELLER, COMMISSIONER, FEDERAL ENERGY REGULATORY COMMISSION; JOHN R. NORRIS, COMMISSIONER, FEDERAL ENERGY REGULATORY COMMISSION; AND TONY CLARK, COMMISSIONER, FEDERAL ENERGY REGULATORY COMMISSION**

**STATEMENT OF CHERYL A. LAFLEUR**

Ms. LAFLEUR. Well, thank you very much, Chairman Whitfield, Ranking Member McNerney, and members of the subcommittee. My name is Cheryl LaFleur. For 3-1/2 years I have had the privilege of serving as a Commissioner on the Federal Energy Regulatory Commission, and I have appeared before this subcommittee previously in that capacity.

Today, I appear before you as the Commission's Acting Chairman, an appointment I received just 10 days ago. Thank you for your good wishes, and I look forward to working with my colleagues and the wonderful employees at FERC in my new role.

Thank you for holding this hearing today. My colleagues and I appreciate the attention you give to your oversight duties and the opportunity to share our work with you. I am honored to lead the Commission at a time when our Nation is making substantial changes in its power supply and its associated infrastructure to meet environmental challenges and improve reliability and security.

In particular, as you noted, we are seeing significant growth in the use of natural gas for electric generation due to the increased availability and affordability of domestic natural gas, and to the relative environmental advantages and flexible operating characteristics of gasgeneration. And that is, I think, a significant advantage we have over Europe with the abundance of domestic natural gas to balance our renewable resources.

The second driver of change is the tremendous growth of renewable and demand side resources, which is being fostered by developments in technology and by policy initiatives in 39 States and at

the Federal level. Finally, new environmental regulations are also contributing to changes in power supply.

Although the drivers of power supply changes are largely outside the Commission's jurisdiction, we must be aware of and adapt to these developments to carry out our responsibilities to ensure just and reasonable rates, a reliable power grid, and fair and efficient electric and gas markets. My colleagues will discuss several of the ways we are responding. We divided up these topics, and I want to focus the balance of my testimony on another critical aspect of our work, reliability and grid security.

Ensuring reliability means that the Commission and NERC, our electric reliability organization, really take care of two things. One is the day-to-day, nuts-and-bolts activities, like trimming trees and setting relays to keep the lights on, emergency response. And the second is emerging issues, like cybersecurity. I believe we are making progress on both fronts. In the past 3 years, we voted out numerous orders on the day-to-day type standards of tree trimming, frequency response, planning criteria, and so forth, and we hear from NERC that they are seeing a reduction in transmission-related outages in the grid as opposed to previous years. Going forward, we very much have to build on that progress.

The emerging issues are somewhat different because we have to try to set standards in an environment of incomplete information. We don't have the benefit of decades of experience, and we know the challenges are evolving. But it is still incumbent on us to try to develop meaningful, cost-effective regulation that we can enforce in an environment of imperfect knowledge.

Two weeks ago, the Commission approved Version 5 of the Critical Infrastructure Protection Standards that cover the bulk electric grid against cybersecurity incidents. They are not perfect. We did ask some questions as we approved them, things that we wanted modified, but they represent a substantial step forward from the protections that were in place before.

We have also started a rulemaking to require standards to protect against geomagnetic disturbances that can be caused by solar storms and human actions, a real example of high-impact, low-frequency threats to reliability that we need to get ready for before they happen.

Finally, I want to touch on the subject that Congressman Waxman raised, the physical security of the assets that make up the grid, protecting them from tampering, vandalism, and sabotage. In general, our approach in this area has been based on cooperative efforts with industry and with other government agencies—DHS, FBI, DOE, and so forth—to try to develop best practices and communicate with industry to make sure they are implementing those best practices.

Thank you very much for the opportunity to be here today, and I look forward to your questions on any aspects of the Commission's work. Thank you.

[The prepared statement of Ms. LaFleur follows:]

**Summary of Testimony of Acting Chairman Cheryl A. LaFleur  
Federal Energy Regulatory Commission  
Before the House Committee on Energy and Commerce  
Subcommittee on Energy and Power  
United States House of Representatives**

**Evaluating the Role of FERC in a Changing Energy Landscape**

December 5, 2013

I am honored to lead the Commission at a time when the nation is making substantial changes in its energy supply and infrastructure to meet environmental challenges and improve reliability and security. Although the drivers of power supply changes are largely outside of the Commission's jurisdiction, we must be aware of, and adapt to, these developments in order to carry out our statutory responsibilities to ensure just and reasonable rates, a reliable power grid, and fair and efficient electricity and natural gas markets. Consistent with these responsibilities, we have worked to ensure that energy markets and grid operations fairly accommodate new sources of energy.

While I am happy to address questions on any aspect of the Commission's work, my testimony will focus primarily on reliability and grid security, as these issues have been high priorities for me at the Commission. Ensuring reliability requires that the Commission pay attention to the day-to-day, nuts and bolts activities necessary to keep the lights on, like tree trimming and relay coordination, and also stay abreast of emerging issues, like cybersecurity and geomagnetic disturbances. I believe that the Commission is making progress on both fronts. With respect to the day-to-day reliability issues, over the last three years the Commission has issued orders on new or modified reliability standards for tree trimming, under-frequency load shedding, and reliability planning criteria, among other areas.

In contrast with more traditional day-to-day reliability issues, the Commission and North American Electric Reliability Corporation (NERC) face different challenges with respect to emerging issues like cybersecurity and geomagnetic disturbances. When it comes to threats like these, we do not have the benefit of decades of experience at our backs; instead, we are in the position of developing meaningful, cost-effective regulation in an environment of rapid change and imperfect knowledge. We must avoid both the temptation to defer action until we have absolute certainty and the pitfall of promulgating specific rules that rapidly become obsolete. In this regard, I believe that the Commission has thus far struck a good balance. Two weeks ago, the Commission approved Version 5 of the Critical Infrastructure Protection Standards, a significant step forward for cybersecurity. Similarly, the Commission recently directed NERC to establish standards to address the threat posed by a geomagnetic disturbance. We will endeavor to build on these efforts to meet existing and new challenges to ensure a reliable power grid.

**Written Testimony of Cheryl A. LaFleur  
Acting Chairman  
Federal Energy Regulatory Commission**

**Before the  
Committee on Energy and Commerce  
Subcommittee on Energy and Power  
United States House of Representatives**

**Hearing on  
Evaluating the Role of FERC in a Changing Energy Landscape**

**December 5, 2013**

Chairman Whitfield, Ranking Member Rush, and members of the Subcommittee:

My name is Cheryl LaFleur. For three and a half years, I have had the privilege of serving as a Commissioner on the Federal Energy Regulatory Commission and have appeared before you previously in that capacity. Today, I appear before you as the Commission's Acting Chairman, an appointment I received ten days ago. I look forward to working with my colleagues and the wonderful team of employees at FERC in my new role.

Thank you for holding this hearing and for the invitation to testify. My colleagues and I appreciate the attention and care you give to your oversight duties, and welcome the opportunity to share with you the work the Commission has done, and continues to do, on behalf of the nation's energy customers. In our testimony this morning, we will collectively cover several aspects of the Commission's current work, and we look forward to answering your questions on these and any other areas of our work.

As you know, the Commission's work spans different industries and encompasses a variety of responsibilities. The Commission regulates the wholesale sale and transmission of electricity and natural gas, and the interstate transportation of oil and petroleum products. It licenses non-federal hydroelectric projects, natural gas pipelines, natural gas storage facilities, and liquefied natural gas (LNG) terminals. It is also responsible for the reliability and security of the bulk power grid, and for protecting customers from manipulation in the electricity and natural gas markets.

I am honored to lead the Commission at a time when the nation is making substantial changes in its power supply and associated infrastructure to meet environmental challenges and improve reliability and security. For example, as the Committee is well aware, our nation is experiencing significant growth in the use of natural gas for electric generation, due primarily to the increased availability and affordability of domestic natural gas, but also to its relative environmental advantages and its role in balancing the growing fleet of variable renewable resources. A second factor driving changes in our power supply is the considerable growth of renewable resources, energy efficiency and demand response programs, fostered by developments in technology and by policy initiatives at both the state and federal level. Finally, new environmental regulations are also contributing to changes in our power supply.

Although the drivers of power supply changes are largely outside of the Commission's jurisdiction, we must be aware of, and adapt to, these developments in order to carry out our statutory responsibilities to ensure just and reasonable rates, a reliable power grid, and fair and efficient electricity and natural gas markets. Consistent with these responsibilities, we have worked to ensure that energy markets and grid operations fairly accommodate new sources of energy.

My colleagues will discuss some of the areas of the Commission's work related to power supply changes. The steady growth in natural gas-fired generation is leading to greater interdependence between the natural gas and electricity markets and their associated infrastructures, which was the subject of the last hearing at which Commissioner Moeller and I testified together. Commissioner Moeller will address this issue and its implications in his testimony. Increased availability of domestic natural gas and its growing use in power generation also has implications for natural gas infrastructure, which Commissioner Clark will touch on in his testimony. Finally, changes in power supply require a more robust transmission grid to serve customers reliably and at just and reasonable rates. Commissioner Norris will discuss the current and future landscape of electric infrastructure in his testimony.

While I am happy to answer questions on any aspect of the Commission's work, I want to focus the balance of my testimony this morning on another critical aspect of the Commission's jurisdiction: reliability and grid security, including cybersecurity. Reliability and grid security have been high priorities for me at the Commission. Because of my past experience working directly for electricity and natural gas customers, I know firsthand how hard even a short outage can be on families, businesses, and communities.

The Commission's direct jurisdiction over electric reliability comes from section 215 of the Federal Power Act, which Congress enacted as part of the Energy Policy Act of 2005. Section 215 directs the Commission to work with an independent Electric Reliability Organization (ERO) to develop reliability standards for the Bulk-Power System. Section 215 authorizes the Commission to identify gaps in reliability that require new reliability standards or modifications to existing standards and to direct the ERO to address those gaps, but it does not



authorize the Commission to write the standards themselves. In 2007, the Commission certified the North American Electric Reliability Corporation (NERC) as the ERO. Reliability Standards are developed by NERC pursuant to an open and inclusive stakeholder process, and submitted to the Commission for review and approval.

Ensuring reliability requires that the Commission pay attention to the day-to-day, nuts and bolts activities necessary to keep the lights on, like tree trimming and relay setting coordination, and also stay abreast of emerging issues, like cybersecurity and geomagnetic disturbances.

I believe that the Commission is making progress on both fronts. With respect to the nuts and bolts issues, the Commission has over the last three years issued orders on new or modified reliability standards for tree trimming, frequency response, under-frequency load shedding, reliability planning criteria, and protection system maintenance and testing, among other areas. According to data compiled by NERC, overall reliability has improved or held steady in recent years. For example, the number of Bulk-Power System transmission-related outages (excluding weather events) averaged nine annually from 2008-2011, but only two occurred in 2012. Going forward, the challenge with respect to these and similar day-to-day issues is to improve on the progress the Commission and NERC have made in setting priorities, developing and implementing reliability standards, mitigating violations, and disseminating lessons learned.

The Commission and NERC face different challenges with respect to emerging issues like cybersecurity and geomagnetic disturbances. When it comes to threats like these, we do not have the benefit of decades of experience at our backs; instead, we are in the position of developing meaningful, cost-effective regulation in an environment of rapid change and imperfect knowledge. We must avoid both the temptation to defer action until we have absolute certainty and the pitfall of promulgating specific rules that rapidly become obsolete.

In this regard, I believe that the Commission has thus far struck a good balance. Two weeks ago, the Commission approved Version 5 of the Critical Infrastructure Protection Standards. These standards are a significant step forward for cybersecurity. For the first time, all electric system cyber assets will be required to receive some level of protection, commensurate with their impact on the grid. This advancement, combined with several new cybersecurity controls developed by NERC, puts into place the most comprehensive cyber protections yet approved by the Commission. In the order approving the Version 5 standards, the Commission also proactively directed its staff to hold a technical conference to discuss additional improvements that may be necessary to further enhance cybersecurity.

Because cyber threats can emerge and change rapidly, they cannot be met with reliability standards alone. The Commission works with leaders in the electric industry and in federal and state government to identify, communicate, and respond to cyber threats against the grid. The

Commission is also participating in a consultative process with the National Institute of Standards and Technology for the development of a cybersecurity framework.

The Commission has also taken action to protect the grid from geomagnetic disturbance (GMD) events caused by solar storms, which are an acute example of “high impact, low frequency” threats to reliability. In May, the Commission directed NERC to address the threat posed by a geomagnetic disturbance event in two stages. In the first stage, the Commission directed NERC to develop a standard or set of standards that require transmission owners to take operational steps to prepare for GMD events. In the second stage, the Commission directed NERC to develop standards that require transmission owners to protect against instability, uncontrolled separation, or cascading failures of the Bulk-Power System caused by a GMD event. The Commission recognized that the nature of the threat posed by a GMD event may require a range of responses depending on location, equipment, and system configuration and gave NERC flexibility in addressing this important issue.

Reliability and grid security also encompasses the physical security of the assets that make up the grid—protecting assets from tampering, vandalism, and sabotage. While certain cybersecurity standards require discrete physical equipment protections, in general, the Commission’s approach to traditional physical security has been based on cooperative efforts with industry and with other government agencies. The Commission continues to work with electric industry leaders to help develop best practices for physical security, which industry is working to implement.

We will endeavor to build on these efforts and to meet existing and new challenges to ensure a reliable power grid.

Thank you again for the opportunity to be here today, and I look forward to your questions.

Mr. WHITFIELD. Thank you, Ms. LaFleur.  
And, Mr. Moeller, you are recognized for 5 minutes.

**STATEMENT OF PHILIP D. MOELLER**

Mr. MOELLER. Well, thank you, Chairman Whitfield, Ranking Member McNerney, members of the committee. Thank you for having us back for this valuable oversight role that you undertake for the Federal Energy Regulatory Commission.

I am Phil Moeller. I am a sitting Commissioner. And your staff asked us to focus on three areas in our testimony today and add additional items that we thought were relevant. So I will talk about the three items—Order 1000, pipeline siting, hydroelectric siting—and add a couple of more—gas-electric coordination and some reliability concerns on the electric grid.

Related to Order 1000, I was generally supportive of Order 1000 because I felt like it would add to the certainty to build needed additional electric transmission in this country. And for the most part, I think it has helped particularly with the transmission planning process. It has forced a more open and arguably more accountable process.

There were a couple of areas that I disagreed with the majority on. The first was how we deal with the right-of-first-refusal projects. This is specific to reliability projects, not those economic projects that reduce congestion costs or the public policy projects that try and promote generally renewables through transmission, but rather when a utility is required because of NERC standards to build a project to enhance reliability. I would have preferred that we give a very limited time of right of first refusal to the incumbent utilities because I didn't think the litigation risk was worth it. And we are seeing the litigation now on that issue. Hopefully that will be resolved soon.

The second area had to do with the cost allocation methods in the rule and the concern that, because of the regional cost-sharing element of it, it would force utilities or give them the incentive to, instead of building more regional projects, just go to local projects. And I think particularly in the Midwest we have seen that happen.

But for the most part, we have several more years of Order 1000 compliance ahead of us, we have further iterations of the intraregional filing, and we haven't even tackled the interregional filings yet and those are going to be very complex with some major policy issues. So Order 1000 will be with us for a while.

Related to hydro siting and pipeline siting, we have a lot of similar issues, and I know members of the committee have been concerned about the length of time that that has taken. But simply put, we are dependent on State and Federal resource agencies in the process to deliver their part of the analysis. And if they delay that, it will delay our ability to act. And I know there has been legislation to consider moving this up. There are more extensive legislative concepts out there in terms of actually giving FERC the ability to decide whether some of these conditions are in the public interest. That would take a major legislative change. But if you are interested we can talk about that further.

Related to gas-electric coordination, Acting Chair LaFleur referenced this, we have been working on this now for about 22

months at the Commission. We have had a series of seven technical conferences. The first five were regional in nature. Then we dug down to a series of issues, the first set on communication, whether people are comfortable talking to each other in this, when there is typically a weather-related supply squeeze. Then we talked about the timing mismatch of the gas trading day and the electric trading day.

I am happy to report that as a commission we issued a final rule on the communication protocols just last month. And I want to thank OMB. I don't know who it was, but they made an effort to make sure that we could have a 30-day turnaround on that rule so that it would be effective December 23rd, before we go into the really tight heating season this year. So they deserve some thanks for that.

On electric reliability, we do have an impending issue related to the effectiveness of the MATS rule, and I just want the committee to be aware of the fact that we are looking at potentially some pretty tight situations in the Midwest, the footprint of the Mid-Continent Independent System Operator, perhaps as early as the summer of 2015, but certainly as soon as the summer of 2016. It is something that I really think deserves your attention. I know that the MISO is working heavily with the States to try and come up with a solution. We are happy to let them try and solve it.

But the time is extremely tight. They can tell you more the numbers, but we are looking at some pretty small reserve margins for the footprint. And recall that under the MISO agreement, they all share the surplus, but they also share the deficits. So if there is a regional deficit, the pain will be shared in terms of, frankly, rolling blackouts if it comes to that. We can hope for a cool summer in the summer of 2016, but that is not necessarily a prudent approach.

So with that, I am happy to answer any questions at the appropriate time.

[The prepared statement of Mr. Moeller follows:]

**One-page summary  
Testimony of FERC Commissioner Philip Moeller  
Before the U.S. House of Representatives**

**Committee on Energy and Commerce  
Subcommittee on Energy and Power**

**Regarding Order No. 1000, Hydropower, Natural Gas, Electricity, and Reliability**

**December 5, 2013**

Order No. 1000 has contributed to a more transparent and inclusive electric transmission planning process, but the compliance period will last at least several more years. The cost allocation portion of the rule may lead incumbent providers to develop proportionately more local projects, while litigation over the “right-of-first-refusal” issue may cause investment uncertainty until it is resolved.

The Commission faces similar challenges when considering certifying natural gas pipelines and licensing hydroelectric dams. Under current law, the process is dependent on timely submissions by state and federal resource agencies, which if submitted late in the process are likely to extend the Commission’s review period.

Over the last 22 months, the Commission has undertaken significant efforts to address the growing convergence of the natural gas and electric industries through seven technical conferences and regular updates. In November the Commission issued its final rule relating to communications regarding sensitive system information in an effort to open communication channels between interstate natural gas pipelines and operators of wholesale electric markets. Continued challenges relate to the mismatch of the gas trading day and the electric trading day, as well as developing new financing models for new interstate natural gas pipelines given that the new customer demand is largely being driven by non-baseload electric generation.

There are growing reliability concerns related to the electric industry meeting the requirements of the Environmental Protection Agency’s rule known as the Mercury and Air Toxics rule. These concerns appear most critical in the Midwest in the footprint of the Mid-Continent Independent System Operator especially approaching the summer of 2016.

**Testimony of FERC Commissioner Philip D. Moeller  
Before the U.S. House of Representatives**

**Committee on Energy and Commerce,  
Subcommittee on Energy and Power**

**Regarding Order No. 1000, Hydropower, Natural Gas, Electricity, and Reliability**

**December 5, 2013**

Chairman Whitfield, Ranking Member Rush, and members of the Committee, I am Phil Moeller, one of the sitting commissioners of the Federal Energy Regulatory Commission. Thank you for your ongoing oversight and for providing us the opportunity to discuss our responsibilities as members of the Commission.

In our testimony today, you asked us to specifically focus on three areas: Order No. 1000, natural gas pipeline siting, and hydropower relicensing, in addition to other matters we wish to raise. I will address these areas in order and add two areas of continued concern.

Order No. 1000

I was generally supportive of Order No. 1000 and subsequent rehearing orders reasoning that the order would lead to the construction of needed electric transmission throughout the nation. From my perspective, Order No. 1000 has led to a more transparent and inclusive transmission planning process that allows for more participants and demands more accountability. However, there are likely to be several years of additional compliance filings from the intra-regional filing parties. We have not yet considered the complex inter-regional filings which have already raised a number of difficult policy questions. Most of these questions deal with the general concept of how to treat transmission projects in one region that provide benefits to another region.

I had two primary concerns with Order No. 1000, as I was concerned some policy decisions taken in the original order could be counter-productive to enhancing additional transmission deployment. The first relates to those projects that are justified on the basis of enhancing system reliability (as opposed to those projects that are economic in nature, and those projects that are built to address specific public policies, such as state renewable mandates). I would have preferred that the rule allowed incumbent transmission providers a limited time right-of-first-refusal to build reliability projects. I am concerned that this policy has led to more states enacting "right-of-first-refusal" laws, and that our approach will lead to litigation and investment uncertainty until the litigation is resolved.

My second concern arises from the cost allocation part of the rule, where Order No. 1000 encourages a competitive process to select those projects that qualify for region-wide cost sharing. My concern was that transmission providers would intentionally focus on local projects

to avoid the competition, or simply build projects that avoid region-wide cost sharing despite the fact that regional cost-sharing would be a more equitable cost allocation method given the regional benefits that would accrue. Unfortunately, that has happened in many cases, where it appears that providers may be starting to do exactly that: assign more projects as local despite the regional benefits that accrue. For example, the Mid-Continent Independent System Operator (MISO) region changed the cost allocation process so that projects which were formerly allocated as if they were regional would now be allocated to only the region where the project is located.<sup>1</sup>

Because of the ongoing compliance filings, rehearing requests and litigation before the D.C. Circuit, issues surrounding Order No. 1000 implementation will be before the Commission for at least several years.

#### Pipeline Siting and Hydropower Relicensing

As for natural gas pipeline siting and hydropower relicensing, many of the challenges that face the Commission are similar for both of these areas. I have a great deal of confidence in the leadership and staff within our Office of Energy Projects. They are dedicated, and they follow the law. To the extent that some entities believe our decisions on certifying natural gas pipelines or the licensing and relicensing of hydropower projects take too long, my impression is that the Commission carries out its responsibilities efficiently and that any delays are often driven by the role that state and federal resource agencies are given by federal law in this process.

Simply put, the Commission is dependent on state and federal agencies to submit timely determinations/conditions as part of the regulatory review of projects. It is especially difficult when these agencies issue their determinations or impose conditions late in the process. In addition, these determinations and conditions may be based on an agency's specific focus, rather than the balanced review of all public interest considerations that the Commission is required by statute to undertake.

If Congress chooses to address this situation, changes in various statutes could require that resource agencies meet certain deadlines in their statutory role in reviewing such projects. Another approach would be to provide the Commission with the authority to rule on whether the conditions that resource agencies submit appropriately balance the benefits and costs that these projects provide. Again, this would require a significant change in the various environmental laws for the relevant resource agencies.

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<sup>1</sup> See the order issued by FERC, available at: *Midwest Independent Transmission System Operator, Inc., et al.*, 142 FERC ¶ 61,215 (2013). This order was issued in Docket No. ER13-187-000, initiated on Oct. 25, 2012.

### Gas/Electric Coordination

Among many others, two additional challenges are likely to occupy the Commission for at least the next several years. The first is a subject on which I testified to this committee on July 9, 2013: the challenges associated with maintaining reliability as our nation uses significantly more natural gas to generate electricity. Often we refer to this issue as natural gas/electric convergence. I reiterate the same points as in earlier testimony: more electric generation is fueled by natural gas for five reasons: (1) the ease in siting natural gas-fueled plants versus other fuels; (2) the difficulty in siting electric transmission that would otherwise be a more cost-effective solution for the supply side; (3) the need to “firm up” intermittent generation; (4) the suite of air and water regulations being implemented by the Environmental Protection Agency (EPA); and (5) the new sources of domestic natural gas supply that have lowered prices.

There is much good news in this unprecedented fuel transition, but challenges remain. The electric and natural gas industries are very different in the speed at which the product moves, the timing of the different markets, and the financial models that provide for building the necessary plants, wires and pipes that are required for reliable service. Unlike a supply of coal that can be stored on-site for months, natural gas is a “just in time” fuel source that is extremely expensive to store for an individual generating plant.

The Commission has been working on the gas/electric coordination issue for nearly two years. Seven technical conferences and periodic updates from regional markets have occurred. Last month the Commission issued its final rule providing guidance for communication of sensitive information between specific sections of the electric industry and natural gas pipeline industry. My hope is that this rule will provide needed certainty in an effort to prevent supply disruptions as early as this winter heating season. We are also examining whether efficiencies can be gained by making changes to better align the gas trading day and the electric trading day in various markets throughout the nation. A longer term issue relates to whether new financing models are needed to promote the expansion of the interstate natural gas network given that the customer base has changed to more electric generation that relies on intermittent withdrawals from pipelines.

### Electric Reliability

Related to, but apart from, the reliability challenges associated with gas/electric coordination, electric reliability in the face of environmental regulations is my second area to highlight. As noted earlier, the transition being undertaken in the electric sector is unprecedented. Data indicate that the predictions of FERC staff and the public were generally correct about the amount of coal generation that would be retired, give notice to retire, or be repowered with natural gas as a consequence of EPA’s mercury rule. Even if the EPA had not issued its mercury rule, today’s lower prices for natural gas and weak economic growth would undoubtedly have resulted in many of those coal plants operating less often and perhaps some would have even



retired. Nevertheless, the mercury rule changes the economics of placing a power plant in reserve for emergencies, as compared to removing it entirely from the system.

Certain areas of the nation will be impacted more than others by the retirement of coal facilities. This is especially true in the Midwest. MISO has been predicting a challenging shortfall in generating capacity for the summer of 2016. While hard numbers are difficult to know many years in advance, MISO seems to be increasingly confident that the shortfalls will be extremely serious. Moreover, MISO's calculations at this point appear to be mostly regional in nature, which suggests that certain areas will be in a much more precarious condition to maintain reliability of the bulk power system. Finally, under MISO's system sharing arrangements, the benefits of surpluses are shared, but in times of scarcity load shedding is also shared, raising the specter of rolling blackouts at a time when air conditioning is essential to public health and safety.

In the face of these reliability challenges over the next several years, economic regulators and environmental regulators at the federal, state, and local levels must act with urgency when considering proposed solutions to this impending set of challenges.

Thank you again for the opportunity to testify before you, and I look forward to any questions you have.

Mr. WHITFIELD. Thank you Mr. Moeller.  
 And our next witness is Mr. John Norris.  
 And you are recognized for 5 minutes, Mr. Norris.

**STATEMENT OF JOHN R. NORRIS**

Mr. NORRIS. Good morning, Chairman Whitfield, Ranking Member McNerney, and members of the subcommittee. Thank you for holding this hearing and the opportunity to testify.

As I acknowledge in my written testimony, there is significant change occurring on our energy landscape. The operation of our energy system in America has experienced, in my view, only modest, incremental change over the last many decades. Yet in recent years, the rapid development of new technologies is bringing much more rapid change to the system. That change can be disruptive. But I think embracing these changes will allow for a much more efficient utilization of our energy resources.

The challenge before us, I believe, is to enable our system to be more efficient through the utilization of new technologies and foster the development of a diverse set of competitive energy resources, while at the same time ensure we have a reliable supply of power at just and reasonable rates for consumers.

As a result of the development of fracking technology, we are experiencing an abundant supply of natural gas and resulting gas prices at their lowest since 2002. This new supply of gas is changing the economics of electric generation, resulting in the retirement of older and less efficient coal units and most recently some nuclear plants.

The new generation being built to replace these units is primarily combined cycle gas plants, wind, and solar generation. This recent trend appears likely to continue. This change in our generation mix has been driven by a significant degree by the economics around low-priced gas and the development of more efficient and productive wind turbines and solar panels. The other drivers are little to no load growth, public policies such as renewable portfolio standards, compliance with EPA rules implementing clean air standards, and the development of demand side management technologies, like energy efficiency and demand response.

At the same time change is occurring in our electric generation we are also experiencing significant developments in technology around grid operations. A large percentage of our existing transmission and distribution grid is quite old and only modest technology enhancements have been made in nearly a century of operations. That system is being replaced by a grid, most commonly referred to as the smart grid, that is opening up multiple opportunities for more efficient utilization of our energy resources and expanding the marketplace for electricity to a vast new supply of diverse energy resources.

One of FERC's recent focuses has been the adjustment of market rules and regulations to ensure that all resources, including new technologies, are able to compete in our energy market and our energy system. The continued investment in new technology and jobs in energy production and management of our energy consumption is critical for maintaining a competitive energy economy and efficient utilization of our resources. As our energy system changes,

providing stability, market access, and fair regulatory treatment is critical to maintaining continued investment in our energy infrastructure.

My written testimony covers several recent actions that FERC has taken that reflect our efforts to make adjustments around these new technologies and resources. I will be happy to answer any questions you may have about these FERC actions, other FERC actions, and to help you in your oversight responsibilities of our agency.

Thank you very much.

[The prepared statement of Mr. Norris follows:]

**Written Testimony of Commissioner John R. Norris  
Federal Energy Regulatory Commission**

**Before the  
Committee on Energy and Commerce  
Subcommittee on Energy and Power  
United States House of Representatives**

**Hearing on  
Evaluating the Role of FERC in a Changing Energy Landscape**

**December 5, 2013**

Chairman Whitfield, Ranking Member Rush, and members of the Subcommittee, thank you for the opportunity to share with you my thoughts on the role of FERC in a changing energy landscape.

My name is John Norris and I have served as a Commissioner on the Federal Energy Regulatory Commission (FERC) since January of 2010.

**Summary**

Significant change is occurring in the energy sector. This change is driven by a new, abundant supply of natural gas; technological innovations in grid operations, renewable energy and energy efficiency; and public policy initiatives and environmental regulations.

Much of our nation's electric generation fleet is aged and the replacement with modern and more efficient technology is occurring. Our coal generation fleet is retiring as a result of both economic factors and environmental regulations. We are also seeing some retirement of nuclear generation as a result of similar economic factors largely driven by low natural gas prices.

Our retiring generation facilities are being predominately replaced by natural gas, renewable energy generation, and the development and deployment of demand-side management technologies including energy efficiency.

Our aged grid infrastructure is attracting significant investment to replace it with a modern, smarter grid system capable of utilizing new technologies. These new technologies are enabling our energy production and consumption to be more efficient.

FERC is striving to provide a level playing field for all technologies to compete and enable consumers to benefit from the efficiencies and enhanced reliability provided by these new technologies.

### **Current and Changing Electric Infrastructure Landscape**

No industry stays static over time. Change is inevitable for a number of reasons including the discovery of new resources and the development of new technologies. Having said that, the energy sector and the electric sector in particular experienced only modest, incremental change for much of the last century. Until recently the electric sector has predominately relied on coal and nuclear fueled generation to produce power, with relatively simple and straightforward transmission and distribution systems to deliver that power to customers. That time of incremental change is clearly over.

Today's aging coal and nuclear plants are being retired and replaced by natural gas, wind, and solar electric generation. In the past 20 years, natural gas has gone from supplying 13 percent of our electricity to more than 25 percent today, with that percentage continuing to rise.<sup>1</sup> Electricity generated by renewable resources, including wind, solar, and hydro-electric power, has increased by almost 20 percent during that same period, and as of 2011 supplied 13 percent of our electricity generation.<sup>2</sup> During this same time period, the U.S. supply of electricity generated from coal has declined from over 50 percent to a little over 40 percent, with a continued decline expected. Meanwhile, nuclear is expected to experience a slight decline.<sup>3</sup>

The primary drivers of this change have been the economics of fuel costs and the development of new gas extraction and generation technologies. For decades, coal was the low cost fuel for electric generation. Through the utilization of fracking technology, an abundant supply of shale gas is now being produced which has significantly lowered the price of natural gas. Also, over the past 15 years, we have witnessed the construction of an increasing number of more efficient combined cycle gas plants. With the

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<sup>1</sup> U.S. Energy Information Administration, *Annual Energy Outlook 2013 Early Release Overview*, at 12 (Dec. 5, 2012), available at [http://www.eia.gov/forecasts/aeo/er/pdf/0383er\(2013\).pdf](http://www.eia.gov/forecasts/aeo/er/pdf/0383er(2013).pdf).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

combination of low gas prices and more efficient generation technology, gas has begun to displace coal in the economic dispatch order.

While this trend is likely to continue, natural gas prices have risen over the past year from a 10 year low of \$3.52 per thousand cubic feet in 2012, when gas generation was commonly displacing coal-fired generation, to a 2013 average to date of \$4.49.<sup>4</sup> If gas prices remain in the current range, the economic choice between gas and coal-fired generation may fluctuate back and forth.

An additional driver for the increasing utilization of gas-fired generation rather than coal-fired generation has been the recent retirements of older, less efficient coal plants due to increasing price competition and the cost to retrofit these less efficient coal plants to meet clean air standards, including the recent EPA rules on mercury emissions. As a result of all of these drivers, a portion of the U.S. coal generation fleet is being replaced by a modern and more efficient fleet of gas generation facilities to meet the U.S. base and intermediate load needs.<sup>5</sup> Indeed, evidence demonstrates that combined-cycle natural gas facilities are significantly more efficient than the typical coal-fired facility, with the heat rates of such combined-cycle natural gas facilities generally being 20 percent lower than the heat rates for coal-fired generators.<sup>6</sup>

This transition is occurring at a time when there is little if any load growth in the electric sector. By comparison, increased load growth had been a constant for over a century. Part of this flat demand is a result of the still struggling U.S. economy. But, another significant factor has been the increasing deployment of energy efficiency and demand-side management technologies. These technologies have provided a valuable additional tool that allows consumers to more efficiently utilize the resources connected to our nation's transmission grid.

Reliance on nuclear powered generation is also declining but at a slower rate than coal, at least thus far. Yet, nuclear powered generation is facing the same economic challenges impacting our coal fleet, including low gas prices and flat demand. In addition, low and sometimes negative wholesale electric prices during high wind

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<sup>4</sup> U.S. Energy Information Administration, "U.S. Natural Gas Electric Power Price" (Oct. 31, 2013), available at <http://www.eia.gov/dnav/ng/hist/n3045us3a.htm>.

<sup>5</sup> Intermediate load units are those that typically run very little at night, but have higher capacity factors during the day. See U.S. Energy Information Administration, "Natural gas-fired combustion turbines are generally used to meet peak electricity load" (Oct. 1, 2013), available at <http://www.eia.gov/todayinenergy/detail.cfm?id=13191>.

<sup>6</sup> See [http://www.eia.gov/electricity/annual/html/epa\\_08\\_01.html](http://www.eia.gov/electricity/annual/html/epa_08_01.html); See also [http://www.eia.gov/electricity/annual/html/epa\\_08\\_02.html](http://www.eia.gov/electricity/annual/html/epa_08_02.html).

generation periods in certain markets are adding to the economic pressure these plants are experiencing. Indeed, recently, utilities have announced the retirement of four nuclear generation facilities.<sup>7</sup>

As more of our coal and nuclear fleet retires, all indicators point to our future electricity needs being met by the combination of new gas and renewable energy generation, including distributed generation and increased deployment of demand-side management.

When I began my first term at FERC in 2010, I met with numerous utility CEOs to ask them about their generation plans for the future. With the exception of one CEO who included new nuclear in his company's plans, every one of them cited gas and renewables. In addition to the economics driven by low cost and abundant natural gas, flat electricity demand, an aged and increasingly inefficient coal fleet, and public policies around energy efficiency and renewable energy, the additional and significant factor for all of them was the ongoing uncertainty around restrictions of carbon emissions. Faced with this combination of factors, those CEOs planned to turn to gas and renewables to meet their future needs. I believe the drivers in place today will have only solidified their positions.

With the exception of building new nuclear in a vertically integrated state where state regulation of generation provides a reasonable assurance of cost recovery, it seems unlikely that new coal or nuclear facilities will be constructed in the foreseeable future. While the political debate around climate change and the need for carbon constraints continues to go back and forth, the scientific indicators around carbon emissions and climate change have remained relatively constant. Numerous CEOs that I have met with since 2010 have concluded that some form of restriction on carbon emissions is likely at some point in the future, but have noted that just the potential for such restrictions on carbon emissions makes it extremely difficult to finance any new coal-fired generation facility. If carbon capture technology becomes economically feasible, that could change this thinking.

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<sup>7</sup> These units include San Onofre Units 2 and 3 in California (Southern California Edison); Crystal River in Florida (Duke Energy Corp.); Vermont Yankee in Vermont (Entergy); Kewaunee in Wisconsin (Dominion). See [http://www.nytimes.com/2013/06/15/business/energy-environment/aging-nuclear-plants-are-closing-but-for-economic-reasons.html?\\_r=2&](http://www.nytimes.com/2013/06/15/business/energy-environment/aging-nuclear-plants-are-closing-but-for-economic-reasons.html?_r=2&) (June 14, 2013); See also ISO New England Press Release "ISO New England Issues Statement on Entergy's Announcement to Retire Vermont Yankee Nuclear Power Plant" (Aug. 27, 2013), available at [http://www.iso-ne.com/nwsiss/pr/2013/iso\\_new\\_england\\_issues\\_statement\\_vy\\_retirement\\_final.pdf](http://www.iso-ne.com/nwsiss/pr/2013/iso_new_england_issues_statement_vy_retirement_final.pdf).

While this significant change in our generation landscape is occurring, there is increasing pressure for utility businesses and the energy sector to modernize the transmission and distribution systems throughout America. Power transformers are on average over 40 years old<sup>8</sup> and 70 percent of our transmission lines are 25 years old or older.<sup>9</sup> Industry estimates of needed investment in America's transmission and distribution system range from 330 to 880 billion dollars over the next 15 to 25 years.<sup>10</sup>

For the past century, the transmission and distribution systems were relatively simple and straightforward in their operations. Because change to our electric transmission and distribution system components is slow to occur, a great deal of those early systems remain in place. To visualize how this system has been operating for decades, imagine a left-to-right flow chart. Fuel was delivered to a central station generation plant. That fuel was converted to electric energy. Electricity was injected on the transmission network out to the substations where power was transformed for the distribution network which sent the power through meters to provide electricity to homes, businesses, and industry. The only thing that traveled right to left was the bill payment.

That system is now being replaced with a more intelligent grid designed to meet the rapidly changing energy landscape. Imagine that same chart but now the system is supporting the free flow of electricity in all directions along with information flowing over the same network, designed to maximize the efficient utilization of energy. This new grid will provide the versatility to incorporate power from the existing fleet of central station power but also distributed generation produced on the rooftops of homes and businesses as well as intermittent sources of renewable generation from remote locations where wind farms and solar arrays are producing electricity at utility scale. In addition to handling electricity flowing in all directions, the modern grid system is

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<sup>8</sup> Richard J. Campbell, Congressional Research Service, "Weather-Related Power Outages and Electric: System Resiliency", at 10 (Aug. 28, 2012) (citing Thomas A. Prevost and David J. Woodcock, Transformer Fleet Health and Risk Assessment, Weidman Electrical Technology, IEEE PES Transformers Committee Tutorial, March 13, 2007, [http://grouper.ieee.org/groups/transformers/info/S07/S07-TR\\_LifeExtension.pdf](http://grouper.ieee.org/groups/transformers/info/S07/S07-TR_LifeExtension.pdf)).

<sup>9</sup> Richard J. Campbell, Congressional Research Service, "Weather-Related Power Outages and Electric: System Resiliency", at 10 (Aug. 28, 2012) (citing K. Anderson, D. Furey, and K. Omar, Frayed Wires: U.S. Transmission System Shows Its Age, Fitch Ratings, October 25, 2006).

<sup>10</sup> See Edison Electric Institute (prepared by The Brattle Group), "Transforming America's Power Industry: The Investment Challenge 2010-2030", at 5 (Nov. 2008), *available at* [http://www.eei.org/ourissues/finance/Documents/Transforming\\_Americas\\_Power\\_Industry\\_Exec\\_Summary.pdf](http://www.eei.org/ourissues/finance/Documents/Transforming_Americas_Power_Industry_Exec_Summary.pdf); See also American Society of Civil Engineers (prepared by Economic Development Research Group, Inc.), "Failure to Act: The Economic Impact of Current Investment Trends in Electricity Infrastructure", at 6 (2011), *available at* [http://www.asce.org/uploadedFiles/Infrastructure/Failure\\_to\\_Act/SCE41%20report\\_Final-lores.pdf](http://www.asce.org/uploadedFiles/Infrastructure/Failure_to_Act/SCE41%20report_Final-lores.pdf).



incorporating new technologies ranging from smart meters at the home to synchrophasors on high-voltage transmission lines to utilize a nearly unimaginable amount of data also being transmitted over the transmission system. The deployment of this new smart grid technology, among other things: enables the operation of a more reliable grid; enables demand response to be incorporated into energy markets; allows consumers to be empowered in their energy use decisions; and enables utility service providers to be more efficient and timely in responding to customer needs.

As a result of the current uncertainty around investment in generation, a large portion of current and planned utility capital expenditures is in transmission and distribution. This will help replace our aged grid and speed up the development of a modern, more efficient grid. It will also help address areas of congestion in the wholesale electricity markets, enhance grid reliability, and provide access to remote renewable resources. The build out of this new, modern grid system or platform is also encouraging the investment in new technologies to continue the incredible advance in more efficient utilization of our energy resources that has taken place in just the last few years.

#### **FERC's Role in the Changing Landscape**

Given that FERC does not have jurisdiction over generation, I believe our role is to ensure that energy markets are fair, open, and transparent so that all resources can compete on a level playing field. We can achieve this by exercising our jurisdictional authority to ensure that our transmission system is meeting the needs of consumers and our economy at rates that are just and reasonable. In particular, we have taken the lead in areas such as transmission planning and reliability.

The Commission has taken or will take a number of steps to protect our energy markets and ensure that our transmission system is reliable, while also ensuring that rates remain just and reasonable. With respect to our transmission system, the Commission has acted to address regional transmission planning and incentives for new transmission infrastructure.

As the wholesale markets for energy expand, as transmission interconnects larger and larger regions of the country and as other operational walls come down in our electric grid, the need for greater regional and interregional planning has become imperative. For the grid to remain reliable and for consumers to be confident the costs for transmission services are just and reasonable, the Commission took action to require that transmission

planning regions establish a process for developing regional transmission plans and address the allocation of transmission costs.<sup>11</sup>

In 2006, as directed by Congress, the Commission established transmission rate incentives to encourage investment in transmission infrastructure in order to benefit consumers by ensuring reliability and reducing the cost of delivered power by reducing transmission congestion. After years of experience, the Commission refined its transmission incentive policies in 2012 to achieve the appropriate balance of incenting needed transmission investment, while meeting our statutory responsibilities to ensure that consumers are paying just and reasonable rates for needed power supply.<sup>12</sup> In refining these policies, the Commission identified three categories of transmission projects that are most likely to receive an incentive return on equity (ROE): 1) projects that relieve chronic grid congestion and provide access to lower cost resources; 2) projects that provide access to location-constrained resources, such as our nation's wealth of renewable resources, that previously had no or limited access to markets; and 3) projects that build the grid of the future by incorporating new advanced technologies that allow for a more efficient utilization and integration of resources.

One of FERC's primary roles with respect to transmission infrastructure is the setting of transmission rates, including providing entities with a reasonable return on investment. With respect to ROEs, FERC also must deal with a number of outstanding transmission ROE cases before us and provide a reasonable level of certainty for transmission investment so our infrastructure needs will be met.

The Commission also took additional action to refine our market rules to ensure that all resources are participating in our markets on a level playing field, while protecting consumers by ensuring that rates remain just and reasonable.

Recently, the Commission held a capacity market technical conference to assess how current centralized capacity market rules are supporting the procurement and retention of resources necessary to meet future reliability and operational needs. We will be receiving stakeholder comments in the next month or so, which will aid our efforts in evaluating whether the current market structures achieve efficient market-based outcomes, or whether rules changes are necessary to achieve that desired objective.

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<sup>11</sup> *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, 76 Fed. Reg. 49,842 (Aug. 11, 2011), FERC Stats. & Regs. ¶ 31,323 (2011).

<sup>12</sup> *Promoting Transmission Investment Through Pricing Reform*, Policy Statement, 141 FERC ¶ 61,129 (2012).

The Commission also addressed market rules for demand response resources by requiring demand response resources to be paid the market price when such resources have the ability to balance supply and demand as an alternative to generation.<sup>13</sup> This reform will lower costs to consumers, provide more resource options for efficient and reliable system operation, encourage new entry and innovation in energy markets, and spur the deployment of new technologies. I believe that demand response is a cost-effective but sometimes underutilized resource, and am encouraged that this reform will remove barriers to its participation in the wholesale electricity markets.

The Commission has also recently required the ISOs and RTOs to modify their dispatch and resource procurement to ensure that resources that can more quickly and accurately provide balancing services are paid accordingly for their performance.<sup>14</sup> This pay-for-performance framework should enable ISOs and RTOs to procure and dispatch fewer resources, thereby lowering costs to consumers. It also sends a more appropriate market signal for further investment in valuable resources that enable the grid to be operated and utilized more efficiently.

Our recent reforms have also touched on rules to foster competition and transparency in the ancillary services markets. In the face of changing resource mixes in various regions of the country, the Commission recognized that there is a growing need for ancillary services to support grid functions and a growing interest from grid operators to have flexibility in meeting such needs. The Commission responded by implementing reforms to foster competition and transparency in the ancillary services markets by incenting new resources to provide ancillary services and enabling grid operators to procure such ancillary services more cost effectively.<sup>15</sup>

As I noted above, it is important that the Commission implement market rules that create a level playing field for all resources. To address the growing penetration of wind and solar generation that has variable or intermittent electrical output, the Commission evaluated existing grid operational practices which assume that the output of generation can be scheduled with relative precision. The Commission concluded that these practices were developed to accommodate the characteristics of existing conventional resources

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<sup>13</sup> *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, 76 Fed. Reg. 16,658 (Mar. 24, 2011), FERC Stats. & Regs. ¶ 31,322 (2011).

<sup>14</sup> *Frequency Regulation Compensation in the Organized Wholesale Power Markets*, Order No. 755, 76 Fed. Reg. 67,260 (Oct. 31, 2011), FERC Stats. & Regs. ¶ 31,324 (2011).

<sup>15</sup> *Third-Party Provision of Ancillary Services; Accounting and Financial Reporting for New Electric Storage Technologies*, Order No. 784, 78 Fed. Reg. 46,177 (July 30, 2013), FERC Stats. & Regs. ¶ 31,349 (2013).

and in some instances placed intermittent resources at an inherent disadvantage in the competitive markets. As a result, the Commission required grid operators to offer more flexible transmission scheduling and further empowered grid operators to acquire the necessary data to forecast the variable output from wind and solar generation.<sup>16</sup> These reforms will serve to reduce the costs of integrating renewable generation by mitigating the need for grid operators to purchase and deploy expensive backup generation or reserves.

Various regions of the country are experiencing significant penetration of small and distributed generation, along with associated generator interconnection requests. In response, just last month, the Commission streamlined our small generator interconnection process to minimize the time and cost necessary for grid operators to study whether small generators can safely and reliably be interconnected to the grid.<sup>17</sup>

Finally, it is important to emphasize our recent role in market oversight. The Commission has exercised our market oversight authority, which was expanded by Congress in the Energy Policy Act of 2005, to aggressively pursue multiple market manipulation schemes in the past few years. We will continue to be vigilant in protecting the integrity of our energy markets, and looking for ways to further bolster our market oversight to ensure that traders and other market actors are acting in accordance with market rules.

I highlight these above actions as examples of recent FERC actions that I believe have been taken to enable the changes occurring in our energy landscape to be integrated with the least disruption and cost to consumers. I believe one of our responsibilities in ensuring just and reasonable rates is to strive for overall efficiency in the operation of our energy system. Currently the integration of new technologies such as distributed generation, demand response, energy storage, smart meters, and intermittent generation resources pose perhaps the greatest challenges to both federal and state regulators.

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<sup>16</sup> *Integration of Variable Energy Resources*, Order No. 764, 77 FR 41482 (July 13, 2012) FERC Stats. & Regs. ¶ 31,331 (2012).

<sup>17</sup> *Small Generator Interconnection Agreements and Procedures*, Order No. 792, 145 FERC ¶ 61,159 (2013).

**Conclusion**

My comments here have been predominately around the electric sector. I understand that one or more of my colleagues are providing more extensive testimony on the regulation of pipelines, hydro-electric facilities and other FERC-jurisdictional responsibilities. However with respect to gas or oil pipelines, hydro-electric facilities or any other infrastructure projects under FERC's jurisdiction, I believe that we have an important role in facilitating the construction of energy infrastructure to meet America's future energy needs. I believe it is important to understand that building new infrastructure is much more difficult today than in years past. You can count on significant resistance from multiple parties to the construction of any new infrastructure. New projects impact people's property rights and values, community planning, the environment, and many other concerns. Balancing those rights and concerns with society's needs for energy will never be easy. I believe our role is to reach a just and reasonable decision, respectful of due process in a fair and reasonable manner as expeditiously as practical and required under the law.

I appreciate the opportunity to testify today regarding FERC's role in the changing energy landscape. This is an extraordinary time to be involved in the development of our nation's energy future. While we face many challenges, there are also many opportunities. Our understanding of those challenges and opportunities benefits from continued dialogue.

Mr. WHITFIELD. Thank you, Mr. Norris.  
 And our next witness, of course, is Mr. Clark.  
 And, Mr. Clark, you are now recognized for 5 minutes.

#### STATEMENT OF TONY CLARK

Mr. CLARK. Thank you, Mr. Chairman, Mr. Ranking Member, and members of the committee. My name is Tony Clark. I am the newest member of FERC. I have had the opportunity to speak before you in a previous job, but this is my first opportunity as a member of the FERC. So thank you for the invitation to be here with you here today.

In my opinion, and, Mr. Chairman, this is something you referenced, the biggest story in energy today is the revolution that is taking place in shale gas and shale oil, probably the biggest story in decades. And this flood of domestic gas has really upended utility planning models and market fundamentals. Gas at the sustained prices that we are seeing now today is dramatically impacting where utilities are putting their money in the build-out of the grid.

As an example, in 1990 coal was responsible for about 53 percent of the electricity that was produced, with natural gas producing just 13 percent. EIA is projecting that by 2040, 35 percent of electricity will come from coal and 30 percent from natural gas. But I would note, however, that predicting these sorts of things is highly speculative. We know that there is some pending rulemakings by the EPA, and depending on how those come out it could have a dramatic impact on how these futures play out.

Such nationwide projections also tend to gloss over the very highly regional nature of our energy and electricity grid. Some regions of the country, such as the central Appalachia, the South, are much more heavily dependent on coal than others, such as New England and the Northwest, and so the implications of fuel switch has a much different impact depending on where you live.

The Commission is heavily engaged in the work of assessing these fuel mix changes and responding to the regional implications of it. For example, FERC has undergone significant efforts with regard to the implications of gas-electricity interdependency that Commissioner Moeller mentioned as more electricity generators simultaneously turn towards natural gas as a fuel source. This effort is important nationwide, but it is particularly crucial for a region like New England where a number of factors, including geography and State-level policy choices, have created an electricity delivery network that is very dependent on a constrained supply of natural gas.

The analysis takes on a different shade in other regions of the country. For example, in my home region of the Midwest coal has traditionally been the primary source of electricity, but today a combination of affordable shale gas and impending EPA regulations is creating a situation where there are increasing concerns about reserve margins and supply adequacy, as Commissioner Moeller noted, especially as we get into that 2015, 2016 timeframe, and it is something we are paying close attention to and I know the committee is as well. Nonetheless, under any scenario, it is

clear that gas will play a much bigger role in the future than it has in the past.

As you might expect, the shale revolution, in both liquids and natural gas production, is having a tremendous impact on the work of FERC itself. As the committee is aware, the FERC has broad oversight of both economic and siting regulation of the natural gas pipeline industry. In recent years, the Commission has seen a shift in this type of work as industry responds to the burgeoning shale plays. Shale gas basins have seen significant pipeline investment. Shale basin pipeline projects that are either in service or in some part of the permitting process at FERC total now over 3,400 miles of pipe, delivering over 31,000 MMcf per day of capacity with a total investment of over \$18 billion.

This large amount of natural gas in the U.S. is also creating an impetus for something that was nearly unimaginable 10 or 15 years ago, which is LNG export applications as opposed to import terminals, and this is the area of significant increase for the Commission's workload. Presently, the FERC has 13 proposed LNG export terminals and 3 LNG import terminals in some phase of the permitting process. And as you would expect, these are major investments and the reviews are quite extensive.

Given the influx of natural gas siting work, I believe the FERC must continually assess our staffing levels and priorities to ensure that we task enough resources to process these projects in a timely and thorough manner. In addition, while the FERC has no control over other Federal agencies that inform our siting process, I would encourage them to help us by also doing what they can to be timely in their assessment work.

Mr. Chairman, with that, I will conclude my testimony. And I touched on a few things, but of course I would be happy to answer any questions that you or the committee members may have.

[The prepared statement of Mr. Clark follows:]

Summary of Testimony of Commissioner Tony Clark  
Federal Energy Regulatory Commission  
Before the Committee on Energy and Commerce, Subcommittee on Energy and Power  
United States House of Representatives

December 5, 2013

Chairman Whitfield, Ranking Member Rush and members of the Subcommittee, the following is a one page summary of my testimony, along with my complete pre-filed testimony.

Perhaps the biggest story in energy today is the emergence of the shale plays, brought about by advancements in horizontal drilling and fracking technologies. This flood of domestic gas and oil, combined with new EPA rules has upended utility planning models and market fundamentals. The Commission is heavily engaged in the work of assessing and responding to these fuel mix changes.

One of the areas where the FERC is seeing an impact on our operations as a result of these activities is with regard to pipelines. The FERC has broad oversight of both economic and siting regulation of the natural gas pipeline industry. In recent years, the Commission has seen a shift in this type of work as industry responds to the burgeoning shale plays. Shale basin pipeline projects that are either in-service or in some stage of FERC permitting total 3,427 miles of pipe, delivering 31,412 MMcf/d of capacity, with a total investment of over \$18 billion.

The large amount of natural gas in the U.S. is also creating an impetus for something that was previously nearly unimaginable, LNG *export*, as opposed to *import* terminals. This is an area of significant workload increase for the Commission. Presently, the FERC has thirteen proposed LNG export terminals and three LNG import terminals in some phase of the permitting process. As you would expect, reviews that entail safely siting large multi-billion dollar energy projects such as these are extensive.

Given this influx of work, I believe the FERC must continually assess our staffing levels and priorities to ensure that we task enough resources to process these projects in a timely and thorough manner. In addition, while the FERC has no control over the other federal agencies that inform our siting processes, I would encourage them to help us by also doing what they can to be timely in their assessment work.

Finally, the emergence and locations of the new shale gas and oil plays are also having an impact on the business models of some existing pipelines. Due to this, the FERC has seen a number of filings in response. In some cases, changing industry dynamics have caused pipelines to revise tariffs, in other cases we have seen proposals to repurpose entire segments of underutilized pipe. All of these events are indicative of an evolving industry that is engaged in activities and large new investments to meet our nation's energy needs.



**Written Testimony of Commissioner Tony Clark  
Federal Energy Regulatory Commission**

**Before the  
Committee on Energy and Commerce  
Subcommittee on Energy and Power  
United States House of Representatives**

**Hearing on  
Evaluating the Role of FERC in a Changing Energy Landscape**

**December 5, 2013**

Mr. Chairman, Ranking Member Rush, and members of the Subcommittee, thank you for the invitation to appear before you today. I am Tony Clark, and it is my honor to serve as a Commissioner of the Federal Energy Regulatory Commission (FERC).

Your hearing is a timely one. Major changes in the energy landscape are having a significant impact on the work of the FERC.

It would be difficult for any one concise piece of testimony to adequately describe all of the major subject matters in energy today. So rather than attempt to cover all areas of potential interest, I will confine my prepared testimony to a few areas of the Commission's work. And of course, I would be pleased to address any of these topics, or any other area of Commission jurisdiction you may wish to explore during the question and answer period.

In my opinion, the biggest story in energy today, perhaps the biggest story in decades, is the emergence of the shale oil and gas plays, brought about by advancements in horizontal drilling and fracking technologies.

My own home state of North Dakota hosts one of the most prominent plays, the Bakken. In my previous job, as a Commissioner and Chairman of the North Dakota Public Service Commission, I had first-hand experience with both the benefits and challenges that come along with the development of these resources.

Not only is the shale revolution a major domestic story, it is a major global story. The long-held assumption that America was destined to be dependent on other nations for our natural gas through increasing imports, much as we have traditionally been for our crude oil, has been proven false.

According to the Energy Information Administration (EIA), in an economy that consumes nearly 25 Tcf of gas a year, we only import a little over 3 Tcf. And about 95% of that total comes from a friendly neighbor, Canada.

LNG imports, which are global in nature, now account for only about 5% of our total imports – most of that at just two terminals. There were only 64 LNG cargoes in 2012. Total LNG imports are down 50% from just one year before, and down from a peak in 2007, when LNG made up 16% of all our imported natural gas.

This flood of domestic gas has upended utility planning models and market fundamentals. Gas at the sustained prices we are now seeing is dramatically impacting where utilities are putting their money. As an example, in 1990, coal was responsible for 53% of electricity production, with just 13% coming from natural gas. By 2040, the EIA projects 35% of electricity coming from coal, and 30% from natural gas. I would note however, that predicting these sorts of things is highly speculative. Environmental Protection Agency rules

will have a dramatic impact on this future, and coal prohibitive rules could drive these numbers in even more dramatic directions.

Such nationwide projections also tend to gloss over the highly regional nature of our electricity grid. Some regions of the nation, such as the Central, the South and Appalachia are much more reliant on coal than others such as New England or the Northwest, so the implications of potential fuel switch will differ greatly.

The Commission is heavily engaged in the work of assessing these fuel mix changes and responding to the regional implications of it. For example, the FERC has undergone significant efforts with regard to the implications of gas-electric interdependency as more electric generators simultaneously turn to natural gas as a fuel source. This effort is important nationwide, but is particularly crucial for a region like New England, where geography and state-level policy choices have created an electricity delivery network that is very dependent on a constrained supply of natural gas.

This analysis takes on a different shade in other regions. For example, in the Midwest, coal has traditionally been the primary source of electricity. But today a combination of affordable shale gas and impending EPA regulations is creating a situation in which there are increasing concerns about the adequacy of electricity generating reserve margins in the 2016 timeframe.

Nonetheless, under any scenario, it is clear gas will play a much bigger role than any of us thought ten years ago.

On the liquid petroleum side of the equation, as a result of the drilling taking place on non-federal lands, our dependence on foreign oil has decreased steadily since 2005. Again,

according to the EIA, today, our nation produces about 60% of what it consumes. We are the world's largest consumer of oil and the world's second largest producer of crude oil, with some analysts projecting the U.S. to soon be the world's top producer.

Of the 40% that is imported, nearly a third comes from Canada and 10% from Mexico. Put another way, approximately three-quarters of our U.S. daily consumption is covered by production from the U.S., Canada and Mexico.

In sum, our nation's newfound liquid petroleum and natural gas wealth is making us economically better-off than we otherwise would be, and also making us more energy secure than we have been in decades.

As you might expect, the shale revolution in both liquids and natural gas production is having a tremendous impact on the work of the FERC. We see this in a number of our different jurisdictional areas, which I will now highlight.

One of the areas where the FERC is seeing an impact on our operations as a result of these activities is with regard to pipelines.

As a former state regulator in an energy producing state, I saw first-hand the importance of pipelines in serving new and expanding production areas. Pipelines are not fool-proof, no method of transportation is, but pipelines are still the safest, most efficient way to get a vitally important product to market. For those producing regions of the country, pipelines help decrease over-the-road traffic; a very real problem in certain areas. Producers, mineral rights owners and all levels of government benefit by being able to receive greater value for the product when there is access to available takeaway capacity.

For consumers, pipelines mean better access to affordable supplies of energy. For businesses, this means a lower cost of production and greater global competitiveness.

For all of us, and our environment included, pipeline access, along with new associated processing facilities mean reduced flaring and conservation of an important natural resource.

As the Committee is aware, the FERC has broad oversight of both economic and siting regulation of the natural gas pipeline industry. In recent years, the Commission has seen a shift in this type of work as industry responds to the burgeoning shale plays.

Shale gas basins have seen significant pipeline investment. Shale basin pipeline projects that are either in-service or in some stage of FERC permitting total 3,427 miles of pipe, delivering 31,412 MMcf/d of capacity, with a total investment of over \$18 billion.

The large amount of natural gas in the U.S. is also creating an impetus for something that was nearly unimaginable ten or fifteen year ago, LNG *export*, as opposed to *import* terminals. This is an area of significant workload increase for the Commission.

Presently, the FERC has thirteen proposed LNG export terminals and three LNG import terminals in some phase of the permitting process. As you would expect, the reviews that entail safely siting large multi-billion dollar energy projects such as these are extensive.

Given this influx of natural gas siting work, I believe that the FERC must continually assess our staffing levels and priorities to ensure that we task enough resources to process these projects in a timely and thorough manner. In addition, while the FERC has no control over the other federal agencies that inform our siting processes, I would encourage them to help us by also doing what they can to be timely in their assessment work.

The locations of the new shale gas plays are also having an impact on the business models of some existing gas pipelines. The FERC has seen a number of filings in response. In some cases, changing industry dynamics have caused pipelines to revise tariffs, in other cases we have seen proposals to repurpose entire segments of underutilized pipe.

Finally, with regard to the oil pipelines themselves, FERC has seen a jump in activity in this sphere as well. While the Commission's legal authority over oil pipelines is much different than that of natural gas pipelines, it has nonetheless seen an increase in the number of petitions for declaratory order (PDOs) from oil pipeline companies seeking FERC review of certain tariff and rate principles prior to undertaking new investment projects. As an example, the Commission processed just three oil pipeline PDOs in FY 2011. In FY 2012, that jumped to ten PDOs. In FY 2013, it increased to fifteen. And since the beginning of FY 2014, we have already received six PDOs. The increase of such petitions is indicative of an industry that is actively building out our nation's infrastructure through new investments, much of which are related to the new flow of domestic crude.

In conclusion, as I noted in my introductory comments, no concise prepared testimony could cover all of the important issues at the FERC today. In addition to the topics I have formally explored, the Commission is also involved in the midst of electric industry reliability standards, cyber security efforts, Order No. 1000 compliance filings, electric transmission rate cases, significant anti-market manipulation enforcement matters, various regional market construct proceedings, hydroelectric dam licensing reforms, and dockets related to addressing significant new pipeline safety costs, to name a few. In short, this appears to be no ordinary time in the world of energy and its regulation. During your question and answer time, I would be happy to address any of these topics you may wish to explore.

Mr. WHITFIELD. Thank you Mr. Clark.

And thank all of you for your opening statements. And at this time, we would like the opportunity to ask you some questions, and I would like to recognize myself for 5 minutes to get started.

Mr. Clark, you mentioned the difficulty in trying to forecast the future. And I might add that last year EPA projected that less than 10 gigawatts of the Nation's coal-fired generation would retire by 2015 as a result of utility MACT. It is not quite 2014, and already announcements have been made to close 50 gigawatts of coal-fired plants because of these EPA regulations and low natural gas prices.

One of your missions is reliability, and there has been a lot of discussion about EPA, whether or not they take that into consideration and the communication and dialogue between FERC and EPA on reliability issues. Do any of you have any concerns? These plants have been announced they are closing, 50 gigawatts, that is a lot, but they are not going to be closed for, you know, maybe another year or so. We will start with you, Mr. Clark, to address that issue briefly, and then I would like to just go down the line.

Mr. CLARK. Sure. Mr. Chairman, the greatest concern, as we have indicated a couple of times already this morning, is probably in the Midwest, the Mid-Continent ISO, MISO, where they are projecting that by the 2016 timeframe they are likely to have a shortfall of somewhere in the neighborhood of 7.5 gigawatts of where they would like to be in terms of reserve capacity. That is a projected number. They are almost certain that there is going to be a shortage of at least a little over 2 gigawatts. So that is the concern in that region. There are concerns in other regions, but probably most acute in the Midwest.

From my perspective, where I would like to see the FERC go is to maintain its independence as an independent regulatory agency, provide what information that we can through the resources that we have through our own modeling efforts to provide information to all of you, as well as the rest of the Federal Government, so they can understand the implications of different policy choices that may be made.

Mr. WHITFIELD. Thank you.

Mr. Norris, do you have a comment on that.

Mr. NORRIS. Certainly, yes. I think Commissioner Clark, I share his concerns, the concerns that Mr. Moeller shared you with about MISO, particularly in the Midwest region. And it could be up to 7 gigawatts, it could be 8.5. They could be in 2016 looking at an 8.5 percent reserve margin. So absolutely I am concerned about that.

Mr. WHITFIELD. Thank you.

Mr. MOELLER.

Mr. MOELLER. Well, I remain concerned. I testified before this committee on the same subject. Remember that MATS takes effect April 16, 2015. We will talk a lot about the fourth year, but the fourth year is only for those plants that are going to retrofit. So if you have got a marginal plant that can't afford to retrofit, it is going to be shut down in roughly about 15 months. And so extremely concerned, mostly the Midwest, but we even had some issues in September in PJM. It was shoulder season. We are going

to have to be watching this very closely. And I think we are hoping that the EPA will be watching it with our help, as well.

Mr. WHITFIELD. And Ms. LaFleur.

Ms. LAFLEUR. Well, thank you. As you can tell, this is an issue we have been very engaged in. For the past 2 years Commissioner Moeller and I have cochaired a forum with the State regulators at NARUC on this very issue, and the EPA has come to every single one of our meetings and discussed some of the issues—how compliance is going, how supply chain issues are going and so forth.

I would say over most of the country I think MATS compliance is well underway. A tremendous amount of construction work is going on right now. There is no question the most significant issues are in the Midwest due to a variety of factors. And in addition to relying on the Mid-Continent ISO and the States, we need to stay closely involved.

Mr. WHITFIELD. Do you feel like EPA is actually listening to you on these reliability issues?

Ms. LAFLEUR. I do because in 2011 when they put out their rule, they included a consultative role for FERC if somebody needs a fifth year. And I believe that includes not just a fifth year for the retrofit, and not just for retrofits, but also if they need a fifth year to bring transmission in before a plant can retire. And we voted out a policy statement of how we would handle those. We haven't gotten them yet because it is not far enough along in the process.

Mr. WHITFIELD. Well, they tell us they are listening to us a lot and sometimes we don't think they are. But our views may be different.

Ms. LAFLEUR. Well, I have been very grateful that they come to all the NARUC meetings and I have a commitment from them that they will continue. But it is something that needs close vigilance.

Mr. WHITFIELD. All right. I was going to ask you about your priorities. I felt like Mr. Wellinghoff's agenda at FERC was basically coinciding with the administration's energy policy, but maybe we will have an opportunity to talk later about that.

At this time, my time has expired, I would like to recognize the gentleman from California for 5 minutes, Mr. McNerney.

Mr. MCNERNEY. Thank you, Mr. Chairman.

One of the things I mentioned in my opening statement was cybersecurity, and I know that that is also an issue that is very important to Mr. Waxman. The thing is that smart grid gives us a tremendous opportunity to gather information so that we can become more reliable, so that we can predict grid behavior, and gives us an opportunity to deliver renewable energy reliably and so on. But it gives the utility companies a tremendous amount of information about individual users, it opens up grids, utility companies for cyberattacks, and so on.

Ms. LaFleur, you said that just 2 weeks ago the Commission passed, I think you said cybersecurity standards?

Ms. LAFLEUR. Yes.

Mr. MCNERNEY. Could you talk about that a little bit? Are those mandatory standards? Are they voluntary? Let's hear a little bit about that.

Ms. LAFLEUR. Well, thank you very much, Mr. Congressman.



Yes, they are mandatory standards. All of the bulk power system, along with the nuclear plants, are really the only part of our critical infrastructure right now that have mandatory standards. And what is new about the critical infrastructure standards we adopted 2 weeks ago, or we proposed to approve—well, we did in a final rule approve 2 weeks ago, I am sorry—is that for the first time they cover not just the super-critical assets, but all elements of the bulk power system receive some level of protection because, as you indicated, with the increasing digitization of the grid, even smaller assets can potentially be a problem.

Mr. MCNERNEY. So when do those standards take effect?

Ms. LAFLEUR. They take effect in general in 2 years, because of the process of getting ready, but there are standards in place now. The earlier generation and the new generation becomes mandatory on top of those standards. But there are mandatory standards already in effect.

Mr. MCNERNEY. Mr. Norris, you mentioned that the old grid technology was being replaced by smart grid. How do you feel that process is progressing of changing the old with the new, more secure grid technology?

Mr. NORRIS. Well, I think it is progressing at the pace of great new technology being developed, and then the Smart Grid Interoperability Panel working to make sure that the platform is usable for all those new technologies. That is the critical piece right now I think, is to make sure that the investment in this new technology is useful, it provides great opportunity for efficiency, and the addition of the cybersecurity standards will, I think, enable that to be a secure system.

Mr. MCNERNEY. Mr. Moeller, you mentioned that the FERC is dependent upon local entities to deliver information on some of the pipeline siting permits. How would Federal legislation that establishes firm timelines, how would that affect the process? Would the States be more responsive or would it just handcuff FERC even further?

Mr. MOELLER. Well, it is largely Federal agencies as well. It depends on the project of course, resource agencies, whether it is Federal, State, sometimes even local. I think the key is you can put in statute perhaps timelines, you could also change the statute in terms of our responsibilities. A lot of the times it comes down to management and whether, particularly the local office head, makes it a priority to deal with these type of projects that we need the input on. And we have seen a wide range of responsiveness and a lack of responsiveness throughout at least the Federal agencies related to this.

Mr. MCNERNEY. So you don't think the legislation would change that?

Mr. MOELLER. Well, the legislation in terms of timelines I think has some positive accountability aspects. But you also have to be careful, as I testified before this committee earlier, that you don't force a timeline that results in a no, because they will say they don't have enough time to analyze. So the timelines and how they are administered would matter.

Mr. MCNERNEY. Thank you.

You know, in the wake of the Enron's fraud and California energy crisis in the early 2000s, Congress passed the antimarket regulation authority in 2005. Recently FERC had an enforcement action against JPMorgan for market manipulations in California and the Midwest. Would you comment on how that turned out, Chairwoman.

Ms. LAFLEUR. Well, thank you. That is a very important part of our work. You gave us additional authority in 2005, and FERC has geared up a very, I think, capable enforcement unit headed by a former U.S. Attorney.

Recently, we have voted out a number of cases either ordering somebody to show cause why they didn't manipulate the market or actually a settlement with them in which they acknowledged a manipulation, and JPMorgan is the most prominent. Most of them relate to people taking positions in the energy market to benefit something in the financial market that can cause harm to other people in the energy market. And I think we have to continue to make sure that we are very vigilant that the markets are fair.

Mr. MCNERNEY. Thank you.

My time has expired.

Mr. WHITFIELD. The gentleman's time has expired.

At this time I recognize the gentleman from Texas, Mr. Barton, for 5 minutes.

Mr. BARTON. Thank you, Mr. Chairman.

And welcome to our newest FERC Chairman. It is good to have you here, ma'am, and the other three Commissioners.

I listened with interest to all four of the opening statements, and I was struck at the breadth of regulatory authority that the FERC has. It is an agency that almost no one hears about, yet its impact on the U.S. economy, and to some extent the world economy, is extraordinary. So it is a very important position that you four people hold.

I am going to focus my questions on LNG siting. Of all the stuff that you folks have responsibility over, there is probably no more important mission that you hold today in terms of the strategic interests of the United States than siting these LNG facilities. The Congress gave you the authority to make the final decision, or at least on the permits, back in the Energy Policy Act of 2005. At the time we did it, we felt you were going to be using that for LNG imports more than LNG exports. But the fact is that between you and the Department of Energy, you have the ability to affect strategic interests all over the world.

I met last evening with some officials from the Russian energy sector, and they are very, very aware of the impact LNG exports from the United States will have in markets that right now the Russians dominate, just as an example. I have also met recently with Turkey, you know, Kazakhstan, some of these countries, Qatar. It is just stunning how our ability to produce natural gas with hydraulic fracturing and horizontal drilling at the prices we can do it that are competitive impacts our ability to affect strategic interests.

So my first question is, under law FERC and DOE have joint authority. It is not real clear how that authority, if at all, is coordinated. Madam Chairwoman, is there any ad hoc protocol with the

Department of Energy on how you review the permit process and how DOE interviews the—just the fact that it is in the national interest to do the exports?

Ms. LAFLEUR. Well, thank you for the question. It is a very important part of our work. And as Commissioner Clark said, we have 13 substantial applications pending.

We primarily work in our own lane, which is to review the environment and safety issues of the facilities, and DOE reviews the actual national interests, national security issues with the export of the commodity. And so I think our staffs communicate so we understand what our mutual statuses are, but we don't actually, to my knowledge, actually collaborate on the cases. We do our work and they do their work, to my knowledge.

Mr. BARTON. Is there any interest at the Commission's level with some congressional legislative guidance on how that process should be coordinated, if at all?

Ms. LAFLEUR. Well, I guess at this moment I am not aware of any undue delays in our process, although we would always welcome Congressional guidance if we can do it better. I know that there is Representative Upton's bill that would change the—I guess that is really for other natural gas—that would change some of the import/export, and I guess I hesitate to comment on anything that is directed at the DOE process because I really feel the DOE folks—

Mr. BARTON. My time is about to expire. I am not trying to be rude at all, I promise you that. But there is a recent decision that the Department of Energy rejected, at least partially, an application by Freeport on exporting from their terminal, and it was a partial acceptance, partial denial. But they stated that since the permit request at FERC was for one amount of volume of natural gas per day that was less than what they were asking at DOE, that they only approved the volume that was in the application pending for the permit at your agency. And since these volumes, depending on the level of the volume, impacts the ability to finance the project, it seemed pretty troubling. And according to at least my staff's reading, the Department of Energy doesn't have any statutory authority to even consider a FERC proceeding under the Natural Gas Act.

Can you comment on that? That is why I am asking about what the coordination protocol, if any, is, because it is obvious that DOE based their decision in terms of volume approval, partially on what your agency was doing.

Ms. LAFLEUR. I think we dealt with or are dealing with the application that is before us in the dimensions of what we were asked to approve, and without reference to the fact that the DOE application was apparently for a different amount. I would be happy to take it back and dig into it more. I guess the question is why the company put in two different amounts in the two different applications.

Mr. BARTON. My time has expired. I am not casting aspersions. Strategically this permitting process is something that we need to get right.

Mr. WHITFIELD. The gentleman's time has expired.

At this time I recognize the gentleman from California, Mr. Waxman, for 5 minutes.

Mr. WAXMAN. Thank you, Mr. Chairman.

Chairman LaFleur, I know you have focused on electric reliability and grid security during your tenure on the Commission and I think you are right to make that a priority. In my opening statement I talked about an April attack on an electric grid substation in California, and my understanding is that this was a sophisticated attack using military-style weapons. And real damage was done, and the consequences could have been far worse. You and I discussed this incident when we met yesterday.

Chairman LaFleur, do you agree this was a serious, sophisticated attack on the electric grid?

Ms. LAFLEUR. Absolutely.

Mr. WAXMAN. Do you share FBI's concern about publicly discussing details of the attack?

Ms. LAFLEUR. Yes, because of the potential for copycat attacks if too much is disclosed.

Mr. WAXMAN. Well, without getting into details, has anything like this physical attack on the electric grid ever happened in the United States before?

Ms. LAFLEUR. I am not aware of an incident with the same sophistication in all of the elements. There have certainly been sabotage-type incidents. You referred to the Arkansas one and people cutting down towers and things. I have heard of that. But this one seemed a little unique to me.

Mr. WAXMAN. Before he stepped down as Chairman, Mr. Wellinghoff was personally briefing officials about this attack. The FBI has agreed to brief members of the committee. Would you be willing to have FERC staff brief committee members as well?

Ms. LAFLEUR. Yes.

Mr. WAXMAN. Chairman LaFleur, does FERC have authority to directly issue standards to protect the grid from physical and cyber attacks?

Ms. LAFLEUR. I believe to an extent under the 215 because there are physical standards for data centers and some that are part of the cyber standards. So we have some authority.

Mr. WAXMAN. Do you have authority to directly issue standards?

Ms. LAFLEUR. Well, it would have to go through the same process you referred to. We can direct the development of a standard, then industry develops it and files it.

Mr. WAXMAN. Well, does FERC even have the authority to issue orders to a utility in a grid security emergency?

Ms. LAFLEUR. No. That is one of the things that I think a lot of the legislation that has been pending has given either FERC or DOE: emergency authority. It is lacking now in the legislation.

Mr. WAXMAN. So you would think that it would be appropriate for Congress to address this gap in authority?

Ms. LAFLEUR. Yes.

Mr. WAXMAN. Let me ask the other Commissioners as well. Do each of you agree that Congress needs to address this gap in authority? Mr. Moeller?

Mr. MOELLER. Yes, my thinking has evolved. I think because of the emergent nature of some of these threats it is worth a good discussion in Congress.

Mr. WAXMAN. Thank you.

Mr. NORRIS.

Mr. NORRIS. Yes, I agree. Someone has got to be in charge of making a decision if we are under threat.

Mr. WAXMAN. Mr. Clark.

Mr. CLARK. I concur.

Mr. WAXMAN. I thank you. This committee should be working in a bipartisan basis to ensure that FERC has the authority it needs to protect the grid from physical and cyber attacks. And I hope, Mr. Chairman, we can rebuild the bipartisan consensus we had in 2010 on the need for legislative action.

And I yield back the balance of my time.

Mr. WHITFIELD. The gentleman from California yields back.

At this time I recognize the gentleman from Illinois, Mr. Shimkus, for 5 minutes.

Mr. SHIMKUS. Thank you, Mr. Chairman.

Thank you all for coming. A lot of issues. I am going to make a couple of statements, then I have got a line of questioning that is parochial to southern Illinois.

But, you know, the first one is, and this is based upon your testimony and some of my colleagues, shame on us if we have rolling blackouts in the Midwest in 2016. I mean shame on us, because it turns us back to a Third World country based upon not balancing our portfolio properly.

And the point being is, we are always going to need big baseload generation. And I deal in the nuclear side. I think there is attack on nuclear power. We know there is attack on coal. We have got renewables coming in, but they are not at the levels we need to maintain adequate supply. And that is why the discussions that the chairman did on the EPA and this discussion about reliability, we really need your help on this because we cannot go down that route.

In fact, I think there has got to be a way, we have to start talking about incentivizing major baseload, 800-megawatt to 1,600-megawatt facilities to make sure that they are still here because of the pressure that is being placed on them because of natural gas and EPA rules and regs. I mean, it is just a reality and we all know that. That is my little statement.

Also I am chair of the Board of Visitors at West Point and I want to follow up with MISO on a transmission grid issue. And I was trying to get some information, didn't get that done in time.

But for the sake of clarity of my constituents in southern Illinois, and I am just going to make this a general question and whoever is most apt to be able to answer that, that would be fine. There is a huge transmission line project that goes from the Missouri border to the Indiana border, it comes right across the State of Illinois. It is called the Illinois Rivers project.

One of the major fights has been on the route, as you can imagine. And just for the record, it is my understanding that route approval is something done with the State, specifically the Illinois

Commerce Committee, and not a FERC matter. Is that correct? Everyone is shaking their head saying correct. Thank you.

It is going to get a lot of my constituents off my back. That is why I am asking these questions.

A second major concern has been over the return on equity provisions, rate and Amron will receive for the project. Some are questioning the 12.38 percent and want to know why they receive that percentage regardless of how the project is conducted. Am I correct that the return on equity is from the MISO transmission owners agreement that was approved by FERC in 2003? And I am seeing the—

Ms. LAFLEUR. Yes. We have jurisdiction over the return on equity.

Mr. SHIMKUS. Thank you. And that the return of equity would be applicable to all transmission owners in the region and their projects, not unique to Illinois Rivers Project. Is that correct?

Ms. LAFLEUR. Yes. MISO has a region-wide return on equity.

Mr. SHIMKUS. Great. Thank you. Lastly, there was a proceeding pending before FERC to re-evaluate the return on equity where interested parties were able to submit comments on the 12.38 percent return on equity rate at FERC. Can you tell me where that stands and what the process is at FERC for reviewing and making a determination on that complaint?

Ms. LAFLEUR. I am hesitant to comment on pending open dockets before us, but I think you have my commitment and I suspect those of my colleagues to give the ROE cases that are pending before us a very high priority, because we know they are important and in—there are several ROE transmission cases pending before us that, as you have referenced, are very important to the companies and the transmission grid.

Mr. SHIMKUS. And the interesting thing about this transmission grid, it really—the citizens of southern Illinois are getting no benefit from this line. It is just a pass-through. So the personal disruption—and it is a pass-through because of renewable portfolio standards and States is trying to wield in green power. So that really needs to be part of the consideration to understand that as these fights go on in siting, there is no benefit to the folks in southern Illinois.

Let me end on the—I wanted to also end on this issue of LNG exports, because I deal also—an additional duty I do is democracy in eastern Europe, and these LNG exports are critical to our NATO allies, Poland, Lithuania, who want to stop the extortion by Russia and using energy as leverage and power. So I agree with Chairman Emeritus Barton. This is not just a critical issue for us; this is a critical issue for peace, democracy, freedom, rule of all, and our allies in NATO, and I hope you can keep that in consideration.

Yield back my time.

Mr. WHITFIELD. The gentleman's time has expired. At this time I recognize the gentleman from Texas, Mr. Green, for 5 minutes.

Mr. GREEN. Thank you, Mr. Chairman.

And first of all, if you don't tell by my accent, I am from Texas and I have a district in Houston, so—and I tell people I was born there, but I have never not lived near a pipeline easement in the Houston area, so, you know, crude oil, natural gas, liquids, you

name it. So I don't have the big concern about it, because it is just part of the way of our life. And our committee has jurisdiction every few years to do pipeline safety. And we passed a good pipeline safety bill last Congress, and I can tell you in a few years we are going to find technology's improved and how we can deal with it, and hopefully we will pass another reauthorization with additional standards that will make them even safer.

Commissioner Clark, in your testimony, you state that approximately 75 percent of our daily consumption's covered by North American resources. You also state that we are more secure than we have been in decades. Would a viable North America energy market further our security interests in?

Mr. CLARK. Congressman, infrastructure generally helps forward our energy security future. With regard to the 75 percent figure, that was in reference to liquid products, crude oil. We have about 75 percent covered from North American resources. On the natural gas side, it is off the charts. It is way over 90 percent.

Mr. GREEN. Yes. OK. In a recent cross-border decision, FERC stated that an export of natural gas would promote national economic policy and stimulate the flow of goods and services. What experience or authority would allow FERC to make such a declaration?

Mr. CLARK. Again, the bill you are referencing, is it the 3300?

Mr. GREEN. No. This is just—FERC stated the export of natural gas would promote national economic policy and stimulate the flow of goods and services. I was just asking you what authority or experience does FERC have to show that—

Mr. CLARK. Sure. Yes. Absolutely.

Mr. GREEN [continuing]. To make that statement?

Mr. CLARK. I mean, FERC's ability to—

Mr. GREEN. I will get to 3301 in a minute.

Mr. CLARK. Yes. FERC's ability to cite infrastructure is clearly critical to the Nation's energy security future and to our national interests.

Mr. GREEN. Would you agree that the statement that the promotion of strong national economic policy is within FERC's decision-making purview?

Mr. CLARK. To the degree it is authorized by statute, yes.

Mr. GREEN. OK. To provide additional authority, do you believe that FERC has the necessary expertise to coordinate and make sound and reliable decisions relating to U.S. interests?

Mr. CLARK. Generally speaking, I believe, yes.

Mr. GREEN. Thank you. Well, in a side note, a number of us went to Mexico for an inter-parliamentary the Friday before Thanksgiving, and one of the things that was the highlight of our discussion with the Members of Congreso was the recent decision on the pipeline from Texas, natural gas pipeline to northern Mexico, because they don't—obviously have a lot of resources but not enough production. And my concern is that—and that was no problem at all. We may be selling or providing natural gas to Mexico, but 20 or 30 years from now we may need to be importing it from Mexico just because of our infrastructure that we are building up because our reasonable priced natural gas downstream, chemical, you name it, manufacturing. But that was a big win when we were—you

know, with our neighbors in Mexico. So I appreciate that on those cross-border pipelines, which brings me up to the H.R. 3301.

The North American Energy Infrastructure Act, FERC staff raised concerns regarding confusion over whether the legislation would prohibit FERC from fully complying with Section 3 and Section 7 of the Natural Gas Act. If we were to amend the legislation to specifically state that nothing in H.R. 3301 would affect the need to fully comply with the Natural Gas Act, do you believe FERC would no longer have concerns with the legislation? And I guess I will ask Dr. LaFleur.

Ms. LAFLEUR. I think you have identified the important concern with the legislation. I think with an amendment, which I have seen in the discussion draft, I think we would be comfortable, I would be comfortable operating under the new law with respect to natural gas imports and exports.

The other parts of the Act, electricity and oil, are beyond us.

Mr. GREEN. And other agencies are in that Act will be able to deal with those.

Ms. LAFLEUR. Yes.

Mr. GREEN. So I appreciate it.

Commissioner Moeller, in your testimony, you state that FERC efficiency would be improved and that many delays are caused by a lack of timeliness from other State or Federal agencies. Could you provide a little more explanation on that? Obviously State agencies, we don't have a whole lot of oversight on, but other Federal agencies, is that delaying FERC providing the typically 12 months turnaround time?

Mr. MOELLER. Yes. We can give you specific examples later if you want them—

Mr. GREEN. OK.

Mr. MOELLER [continuing]. But it kind of depends. It goes back to the point I made earlier. There is a lot of regional differences. If the management regionally makes it a priority, it happens; if they don't, they can drag their feet.

Mr. GREEN. OK. Before I lose all the time, Chairwoman LaFleur, there is some concern in Texas about our reliability issues, and a number of us on this subcommittee have made attempts to resolve an issue, because Department of Energy says you can do something with a power plant, but EPA says no, and we are trying to correct that. I know our committee's passed that H.R. 271, Revolving Environmental and Grid Reliability Conflicts Act. I would hope we would deal with that, because that would help us, at least in Texas, with some of our liability issues and I think it would help nationally. So thank you for your courtesy.

Mr. WHITFIELD. The gentleman's time has expired. The gentlemen from Pennsylvania, Mr. Pitts, is recognized for 5 minutes.

Mr. PITTS. Thank you, Mr. Chairman.

The concept of beneficiary pace is at the heart of the way our transmission system operates and assigns costs, and I am concerned that under Order 1000, FERC is defining benefits so broadly and spreading costs so widely that this simple axiom has no meaning anymore.

Chairwoman LaFleur, please explain your idea of beneficiary pace, what that should mean. And keep in mind, I don't want my



constituents paying for subsidized midwest wind into my market with no voice in the process. And I know you can't address the merits of individual compliance filings under FERC's Order 1000, but there is a legal point I would like to raise with you, I think stands on its own, to which I hope you will be able to respond.

Ms. LAFLEUR. Well, thank you very much, Congressman Pitts. The Order 1000 required regions to plan cooperatively across the region, as the region encompassing Pennsylvania already does, and take into account three kinds of benefits: reliability benefits, which can be very hard to quantify but are very real; the meeting public policy requirements to connect resources that States require them to connect, which are normally identified by the States, such as Pennsylvania, which has a renewable portfolio standard; and thirdly, congestion benefits to reduce the cost of power by building more transmission.

And the order required the regions to take those benefits into account in assigning the costs, and I think the region that Pennsylvania is a part of is a good example of coming up with a hybrid proposal that used different types of cost allocation together for different types of benefits that I think is a—that we have approved preliminarily in the first case.

Mr. PITTS. Do you think FERC has authority under the Federal Power Act to allocate costs for new transmission to entities that don't have a customer or contractual relationship to the builder of the line and don't need the capacity provided by the line?

Ms. LAFLEUR. I think that under the court decisions and our orders, there has to be a proportionality between benefits and costs, but not necessarily line-by-line. There can be a portfolio of projects that a region agrees to that some benefit one area, some benefit another. And if a region agrees to it, we assume they have negotiated, that they all get something.

Mr. PITTS. Can you show me what section of the Federal Power Act gives FERC this authority to allocate costs in the absence of a contractual relationship?

Ms. LAFLEUR. Yes. We are relying on the sections of the Act that require just and reasonable and non-discriminatory rates, thinking that a process where the States involved and the companies involved negotiate the costs will help ensure just and reasonable transition rates.

Mr. PITTS. Commissioner Clark, in specific, FERC Order 1000 compliance filing orders, you have raised some serious concerns about potential downsides of the Commission's implementation of Order 1000. Can you elaborate on these concerns and particularly the implications for consumers?

Mr. CLARK. Sure. To the degree that Order 1000, Congressman, deals with the need for perhaps greater regional planning, I am on board with that. I think it is just prudent for utilities to do so. To the degree that it is about trying to come to more accommodation with regard to cause or cost, payer cost payer allocation issues, I think that is helpful.

Where I have disagreed with the majority of the Commission from time to time is with regard to how FERC has been understanding and allowing the ISO's and RTO's and utilities to take into consideration those State and local laws that they still have

to comply with because we have this Federal system where they still have substantial State and local compliance laws. And I have tended to argue that we need to give more latitude for those utilities that we regulate to continue to understand, to comply with and give them the flexibility to take into consideration those existing State and local laws, and not use Order 1000 as an attempt to sort of shake up the jurisdictional box, which I think just leads to greater litigation.

Mr. PITTS. Under Order 1000, it is predicated on the—it is predicated on the idea, not the evidentiary record, that insufficient transmission is being built. How does the order solve this problem and how will we know when the proper amount of transmission is being built? Will the marketplace tell us? Will local utilities tell us? Will FERC tell us? What? Mr. Clark.

Mr. CLARK. Mr. Chairman and Congressman, the way I understand it, it'll be an iterative process, so it will take a little bit different shape in different regions. As I indicated, the grid is highly regional by nature. In some regions, like the midwest, you have renewables in parts of the region, you have renewal portfolio standards in other parts of the region, you have regional utilities and States coming together and talking about some of those issues.

In other regions of the country, like the southeast, you have a much, much different situation. You have don't have access to renewables, and you have a different regulatory structure in those States.

I just believe that FERC has to be open to understanding each of those regional differences and accommodating those.

Mr. PITTS. OK.

Mr. WHITFIELD. The gentleman's time has expired. At this time I recognize the gentleman from New York, Mr. Tonko, for 5 minutes.

Mr. TONKO. Thank you, Mr. Chair.

Commissioner LaFleur, in your testimony, you noted improvement between the years 2011 and 2012 in the number of non-weather-related bulk power system transmission related outages. As you know, we have several other related issues that can contribute to reliability problems, older transmission lines and grid equipment that needs to be upgraded or replaced and an increase in severe weather events that I have seen in my district and throughout New York that can cause outages.

In addition, we have much more reliance on IT in general for everything from financial transactions, to research and manufacturing, things that require exceptionally reliable power delivery.

How are these changes in the nature of the demand for power, the aging parts of the grid and the increased frequency and intensity of storm-related disruptions being considered in FERC's reliability efforts?

Ms. LAFLEUR. Well, thank you. That is a big question. I guess there are at least two different parts of it: one is the actual reliability standards to make sure that the transmission asset owners have the accountability for the refurbishment of their lines so that the lines operate properly in order to meet the standards, but secondly, is in—we were talking about Order 1000 transmission planning, a reference was made to transmission rates, that is all a part

of making sure that the structures are in place so that the companies can invest the money they need to replace aging infrastructure. And as you know, I am familiar with some of the aged resources in your region. They were—it was an early part of the country to electrify.

Mr. TONKO. Thank you. Thank you very much. And FERC's changes to the capacity market rules in both the PJM area and ISO New England threaten to continue the ability of load-serving entities to self-supply their own capacity resources to serve their own loads. This problem is particularly acute for publicly-owned and cooperatively-owned electric utilities, because it endangers their ability to finance new generation units needed to serve their customer base using their traditional business model, which relies on long-term contracts and lower cost debt.

Do you anticipate that public power or cooperatively-owned utilities in these RTO's would be able to successfully exercise buyer side market power and RTO capacity markets?

Ms. LAFLEUR. Well, this is a question that is directly being looked at in our ongoing capacity marketing inquiry that is open right now with a very heavy participation of public power, but basically the capacity markets that are forward price of what reliability is worth that is used to assign what the generators, the existing fossil generators as well as new generators, will get paid for being there. And if people are allowed to bid in with a subsidized rate that doesn't refer to the market, it can pull down the market rate and it could affect everyone's reliability, but munis always have the right to prove that their costs are lower and show the ISO that they can self-supply because they can do it more cheaply.

Mr. TONKO. Thank you. Thank you. Mr. Norris, your testimony describes the many changes that are simultaneously occurring throughout the country in the power production use and delivery landscape. I am particularly interested in the challenge that our successes with energy efficiency, demand management and renewables are presenting to the traditional economic models for utilities. The success of energy efficiency and demand management is a good story, but companies do not increase profits by figuring out how to sell less of their major product.

So how are we going to provide continued incentives to seek more efficiencies and better management of demand if these goals further erode utilities' ability to earn profits?

Mr. NORRIS. Well, Congressman, a lot of those determinations are made at the State level, at the retail rate regulation. What we have been doing at FERC is trying to make sure that there is access to the markets for different new technologies that enable demand response in energy efficiency. Certainly you see it in the PJM market and the huge increase in demand response capability and that ability for that to bid into the marketplace, and PJM has fostered development of demand response in that region.

Different regions of the country are also looking at ways to develop better demand response resources or more demand response resources. I presume it will be part of the package of solutions in MISO as they look at meeting their potential capacity shortfall in 2016 and beyond.

So what we are doing is to make sure that there is—that demand response gets treated fairly in the marketplace, so as a reward for investors in that technology.

Mr. TONKO. Do you see, like, a major restructuring of the power sector over time?

Mr. NORRIS. Major restructuring of the?

Mr. TONKO. Of the power sector over time.

Mr. NORRIS. Yes. I think it is happening right now. I mean, I think you have got a lot more people engaged. Historically it has been central station power owned by the utility and delivered to the homes and businesses. Now you have got—consumers want to be involved and engaged in their own energy production and more engaged in their energy usage. The development of the technologies on the smart grid are enabling those consumers to do that. The traditional utility and power sectors having to respond to that change in customer demand, much like what happened in the telecom sector, but it is bringing great efficiencies to our utilization of energy.

Mr. TONKO. Mr. Chair, I yield back.

Mr. WHITFIELD. The gentleman's time has expired. At this time I recognize the gentleman from Ohio, Mr. Latta, for 5 minutes.

Mr. LATTA. Thank you, Mr. Chair.

And I thank the Commissioners for being with us today. I appreciate your testimony. If I could start with Chairman LaFleur, just a series of questions, if I could. Under Former Chairman Wellenough, FERC's top initiatives included the smart grid, demand response, integration of renewables, and Order 1000 transmission planning cost allocation. Do you see that you would be continuing on with the former chairman's goals, or do you have other goals? Do you agree with those, disagree, or where do you see you directing the Commission?

Ms. LAFLEUR. Well, it is a timely question, because I am just in the process of talking to each of my colleagues, since it has been about a week that I have been in the job, to really set consensus objectives going forward, but I see that reliability and security will continue to be a top priority, and that includes resource adequacy, because you need the resources to be reliable, which we have talked about a lot this morning. We have a lot more work to do on transmission, so Order 1000, as I believe Commissioner Moeller said, is going to be a big part of our work for a while, as well as transmission rates that was brought up. And I think making sure the markets are fair and that they work to attract the investment the country needs, and that the infrastructure is there, are clearly four priorities, but I think to be refined as we continue forward, but those are things that are ongoing.

Mr. LATTA. Well, if I could, just a couple of areas, then. Where would you see that—like, natural gas pipeline permitting, where would that be on your priority list?

Ms. LAFLEUR. Well, I think I referred to that in general in the term "infrastructure," but I think that in general, I think our projects group does a good job handling the pipeline applications in a timely fashion. We are seeing a lot of them, especially spurs and compressor stations in the Marcellas, and we have to continue to handle them. We do about 92 percent in a year, and I think that we should continue to do so.

Mr. LATTA. Well, you know, especially on the pipeline permitting is very important across the midwest, especially, as you just said, on the Marcellas and Ohio, we have the Utica. And, you know, one of the great things we have is we have all the natural gas, but one of the problems we are having is we don't have the ability to get that natural gas where it needs to be. The potential in Ohio where the chemical industry at the same time being able to have that gas cracked and then to be able to utilize it, again, all depends on that pipeline permitting, so that is very, very important.

Also, what about on organized wholesale electricity markets? Where do you see you on that?

Ms. LAFLEUR. I see that as the—all the things we have been talking about today, the power supply changing, we have seen a lot of changes in the markets to adapt to new resources and make sure the resources are there when the customers need them. Right now we are focusing in on the capacity markets, and I don't think that that is going to change in terms of the level of cases or the amount of things we need to look at.

Mr. LATTA. OK. Just one last question, if I could, with you, Madam Chair. What are the best measures to determine whether the restructured wholesale electricity markets operated by regional transmission organizations are benefiting consumers?

Ms. LAFLEUR. Well, that is a big question. I think certainly reliability is a key one, but also looking at the costs over time. It is very difficult to compare the costs of the restructured markets with the places that didn't restructure, because the places that restructured were the high cost places to begin with. That is why they restructured. But I think looking at the costs and reliability are two big ones.

Mr. LATTA. OK. And Commissioner Moeller, does FERC plan to exert jurisdiction over the generation or transmission activities of the non-jurisdictional entities?

Mr. MOELLER. Not that I am aware of.

Mr. LATTA. OK. I want to make sure about that.

And also, if I—my remaining 40 seconds, Commissioner Clark, in Title 7 of Dodd-Frank, Congress required the FERC and the CFTC to enter into a memorandum of understanding to establish procedures for resolving your jurisdictional conflicts over energy derivatives.

What needs to be done in order to resolve the jurisdictional conflict between the agencies and provide industry the certainty it needs?

Mr. CLARK. FERC's position, Congressman, is that both agencies should be able to fully share in the information that we each have so that we can do what we believe Congress has intended us to do. For whatever reason, for reasons that predate my term on the Commission, that hasn't happened. We have had now leadership changes in both commissions, and I am hopeful that there can be a way that FERC and CFTC can have a meeting of the minds and strike that MOU.

Mr. LATTA. Thank you.

Mr. Chair, my time's expired and I yield back.

Mr. WHITFIELD. The gentleman's time has expired. At this time, I recognize the gentlelady from Florida, Ms. Castor, for 5 minutes.

Ms. CASTOR. Thank you, Mr. Chairman.

And good morning. I think you all are serving on the Federal Energy Regulatory Commission at a very exciting time. I mean, this has been a remarkable time with the natural gas revolution that comes at an important time when we have got to—when we are seeing natural gas supplant coal at a—when we know that it is vital to reduce carbon pollution, and then add on top of that all of the innovation in the smart grid, demand management and renewables. So while all that change is occurring, your responsibilities remain very important to ensure that consumers are protected, that you are charged with enforcing laws that protect consumers and ensure fair competition in the electric and natural gas markets, you have got to maintain your important relationships with State and regional partners to ensure that necessary energy infrastructure gets constructed, but what Mr. Tonko was—Representative Tonko was talking about, it is almost outdated now, the old utility model of selling as many kilowatt hours as possible.

Instead, with what we know about smart grids and energy efficiency, we have got to be able to do some things, and some States are doing it, to incentivize greater conservation while at the same time keeping an eye on our infrastructure and reliability. So I think what you all have been doing to ensure that renewables compete on a level playing field is very important, also that energy efficiency and demand side management are also treated fairly as they compete with traditional power generation.

Now, FERC itself has said that they recognize demand response can help reduce electric price volatility, mitigate generation, market power and enhance reliability. You have issued a recent staff report, I know Mr. Norris was able to comment on it. Madam Chair, could you comment on that recent staff report, the findings, and what else FERC is going to be doing to channel this great innovation across the country?

Ms. LAFLEUR. Well, thank you. Yes. The staff report is something that we do under the Energy Policy Act, and it looked at the level of demand response around the country. Our primary focus is on the wholesale markets. I think we have—under—2 years ago did a—had a significant case on how you compensate demand response in the energy markets. Right now there are a lot of issues pending with respect to how you compensate demand response in the capacity markets, and I think we will continue to confront those as a part of our capacity market inquiry.

I do think, though, that a lot of the effort to unbundle rates and incentivize efficiency is at the State level. And I know your Commissioner is going to be the president of NARUC soon, and I think that is where a lot of the innovation is still coming in the retail markets.

Ms. CASTOR. It just seems like some States are so far behind. I would say my State, we can do a much better job, and people are really waking up to the fact. Young people now, they expect to be able to use their smartphone to turn down their thermostat.

And while, Commissioner Norris, you mentioned in your testimony that you have had conversations with a number of utility CEO's about their electricity generation plans for the future, you said virtually all CEO's you talked to said they were focused on in-

creasing natural gas and renewable energy generation. Is that right?

Mr. NORRIS. [No verbal response.]

Ms. CASTOR. And what do you—why do you think they are recognizing, waking up to the fact that it is natural gas and renewables that are their future?

Mr. NORRIS. A combination of low-priced natural gas and apparent abundant supply, incentives for renewables and meeting State renewable portfolio standards. But one of the biggest factors we haven't talked about today is just the uncertainty, the uncertainty of an investment in coal-fired generation, because as I said in my written testimony, those CEO's and people I have talked to in this industry, it is not just whether—it is not just when—it is either when legislation will occur or the likelihood it will occur at some point is really precluding financing of new coal generation in this country.

Ms. CASTOR. And it is the science and the economics as well, the science that tells us we have got to reduce carbon pollution and the economics are telling us the exact same thing. Think about the State of Florida where now taxpayers are going to have to invest and they are already investing huge sums of money to begin to adapt to a changing climate. Think about the huge bills, the bills that come due every time we have an extreme weather event, whether it is drought or super storms. And I would think that the utility industry also sees the writing on the wall. They are looking for that certainty. And the more aggressive we are on moving away from carbon intensive energy generation, the better. Thank you very much.

Mr. WHITFIELD. The gentlelady's time has expired. At this time, I recognize the gentleman from West Virginia, Mr. McKinley, for 5 minutes.

Mr. MCKINLEY. Thank you, Mr. Chairman.

Chairman LaFleur, perhaps you can give me some direction here a little bit on this. We have a growing problem in West Virginia with stranded gas and the production of the various constituents with NGO that we can't use necessarily in the local market, it has to be shipped. Currently a lot of it is being flared or just wasted, which is a shame, and it doesn't benefit the consumer and doesn't help the environment any.

So my question is, what I am hearing or sensing is there is—and I think it is not unique just to West Virginia with this exploration of the Utica and the Marcellas in a number of States, there seems to be a potential jurisdictional problem starting to flare up a little bit, and one of them is—so my question to you is should we be treating NGO's as natural gas and thereby allowing the Federal Government, your group, to take care of that, or should we continue having the NGO's handled at the State level and manage it that way? Do you have a position on that?

Ms. LAFLEUR. I hadn't thought of the jurisdictional question. It is a good thing for the committee to be looking at. There is a lot of stranded gas capacity as well as gas that is being flared because there is not sufficient take-away capacity for the liquids. We only do the pricing for the liquids pipelines under Interstate Commerce Act, but we don't do the siting. I suspect some of the States that

think they do the siting very well would not welcome Federal siting. I think we could do it well, because we do it well with gas pipelines, but it might not be as popular with some of the States involved, but I think—

Mr. MCKINLEY. I think that is a fair statement.

Ms. LAFLEUR [continuing]. We've done a good job with that.

Mr. MCKINLEY. I'm just trying—whether or not you want—are you going to take a more passive and let the States continue to do—or are you going to try to assert a role that otherwise is not expected?

Ms. LAFLEUR. I didn't have a plan to redefine natural gas under the Natural Gas Act, but I think it is something to think about.

Mr. MCKINLEY. OK. Could you provide us in writing, because with the time frame, we don't—and especially since you said you weren't prepared to discuss that necessarily, can you provide us some rationale for the Federal Government to be involved in this as compared to the States?

Ms. LAFLEUR. Yes. We will certainly take that and think about it. Thanks for the opportunity to think more.

Mr. MCKINLEY. OK. Thank you. Now, and the last is maybe more generic, but probably for over 10 years as an engineer in private practice prior, we were concerned about electromagnetic pulse, and it has been mentioned here again. I have been hearing about it for well over a decade, but certainly in the last 5 or 6 years. People have been talking even more here the last 3 years that I have been in Congress. Where are we with this? Or are we just waiting for some catastrophic event to happen, because there is just an awful lot of talk, but no action?

Ms. LAFLEUR. Well, I think I mentioned in my written testimony and briefly in my verbal testimony that last year, the Commission voted out a rule requiring utilities to have operational plans and response plans for—

Mr. MCKINLEY. I guess more what I am saying, what is your expectation, not just your plan?

Ms. LAFLEUR. I think that the geomagnetic disturbance standards that we will get, and we have one pending, will help somewhat with the electromagnetic pulse. Although there—I think there's also voluntary efforts going on in the North American Transmission Forum to talk about other aspects of the EMP, but I think the GMD standards are probably the most tangible action that has going on in this area for a long time.

Mr. MCKINLEY. Is there progress being made in Europe or elsewhere with EMP's, but it is not unique to western—to the United States?

Ms. LAFLEUR. I am sorry. I didn't—

Mr. MCKINLEY. Is there progress being made with other countries in dealing with EMP's?

Ms. LAFLEUR. It is variable. A lot of progress is being made in Scandinavia, South Africa and the United Kingdom. A lot of other countries are taking a wait-and-see approach and looking—Israel. Israel is also doing a lot. Other countries are taking more of a wait-and-see approach.

Mr. MCKINLEY. Thank you. We will have further conversation, but thank very much.



Ms. LAFLEUR. Thank you.

Mr. WHITFIELD. The gentleman yields back the balance of his time. At this time, I recognize the gentleman from Colorado, Mr. Gardner, for 5 minutes.

Mr. GARDNER. Thank you, Mr. Chairman.

And thank you to the members of the Commission for being here today, and congratulations to the acting chairman. I just wanted to follow up on a question, a brief conversation to Mr. Moeller that we touched on earlier, and it was an intriguing, I think, question raised. In Colorado, I think in—just a couple years ago, we had the Hyde Park fire, which became the State's most devastating forest fire, followed a week later by the Waldo Canyon fire, which became the State's most devastating natural disaster. This past year we have experienced the Black Forest fire.

Do you believe that forest health threatens grid reliability?

Mr. MOELLER. Well, I recall being involved in that issue, because I think we wrote the Forest Service—or I wrote the Forest Service after talking to Colorado officials, including, I think, a Democratic State senator who works for the Keystone Foundation, just very concerned about the amount of dead forest and its threat from a fire perspective on transmission lines. That was the Nexus defer. So, yes, forest health—I come from the State of Washington. Forest health is a big issue up there, and particularly with the pine beetle issue. Should we hope for 2 more weeks of really cold weather to kill those beetles? I guess that is a mixed question, but it would be nice—it would be nice if that threat to reliability can be removed.

Mr. GARDNER. We would love to follow up with you a little bit more on that.

And to Acting Chairman LaFleur or Commissioner Moeller, earlier this year we unanimously passed the Hydropower Regulatory Efficiency Act. This Act revised how FERC regulates small conduit hydro projects, required the Commission to investigate a 2-year licensing process for non powered dams, and closed-loop pump storage projects, and also conduct pilot projects.

Could you give us an update on the Commission's activities to date to implement these and what provisions of the law outline—you know, the other provisions of the law, and outline what steps the Commission will take in 2014 to implement the law?

Ms. LAFLEUR. Yes, certainly. We have already received a large number of exemption applications for conduits, I believe 18, and they are all in some stage of the process. A couple of them have already been approved and others are close to approval. So that took effect immediately, and—

Mr. GARDNER. Would you mind giving us maybe an idea of those 18 and which ones have been approved and where they are at?

Ms. LAFLEUR. Certainly. We will take that as a written question and where they are in the process.

Also, on, I believe it was October 22nd, we held a tech conference, a technical conference on what we can do to help speed up the process in the 2-year licensing requirement. I believe comments are outstanding right now, and the folks in the hydro section are working on that; they had a lot of the other agencies involved that contribute to the timing as well.

We have received fewer applications for some of the other parts of the law as of yet, you know, the 40-megawatt exemption and so forth.

Mr. GARDNER. Do you believe that FERC will be able to implement the pilot projects in 2014?

Ms. LAFLEUR. Yes.

Mr. GARDNER. OK. You talked a little about the workshops, you talked about what you learned. Do you believe that we will be able to get through the intent of the legislation in the next 2 years, implement the intent of the legislation?

Ms. LAFLEUR. You mean satisfy the intent of the legislation?

Mr. GARDNER. Yes. Correct.

Ms. LAFLEUR. I certainly think that is our job.

Mr. GARDNER. OK. And the process for excluding small conduit hydro projects from FERC licensing, how is that working?

Ms. LAFLEUR. I—we—it is working actually very well with your State, because of our Memorandum of Understanding, and we recently entered into one with California, I believe, just a couple weeks ago. It is variable in different regions, because some of the States don't have the resources on hydro to have the same level of cooperation, but it is something we have put a lot of effort into. The hydro team has simplified the Web site, simplified the processes to try to process them as quickly as we can.

Mr. GARDNER. And do you have a number on the determinations that have been sought?

Ms. LAFLEUR. No, but I can get that and take it as a question for the record.

Mr. GARDNER. That would be fantastic. If we could find out those granted and those denied, that would be great. And if you could provide some statistics on the length of time these proceedings have taken as well, that would be great.

Ms. LAFLEUR. Yes.

Mr. GARDNER. To Mr. Moeller, Commissioner Moeller, Commissioner Clark, a question for you, and I am running out of time here, should behind-the-meter generation be treated as a demand response resource or generation resource?

Mr. MOELLER. Very timely. I have issues with behind-the-meter generation, because it is not dispatchable like other forms, and I will point you to a dissent that I wrote earlier this week on a particular order.

Mr. GARDNER. And Commissioner Clark, quickly, then I am going to have to follow up on the record with some of these other questions and some FERC 1000 Order questions.

Mr. CLARK. Sure. Congressman, to a great degree, I think it depends on the record in each of those individual cases. I would have a concern in some areas, and others, if measurement and verification can be proven, I believe they may be able to participate. There is a separate question with regard to compensation that should be given to those resources, and from time to time, I have disagreed with parts of the Commission's orders on that issue.

Mr. GARDNER. Thank you. Mr. Chairman, I will follow up with additional questions.

Mr. WHITFIELD. The gentleman's time has expired. At this time I recognize the gentleman from Virginia, Mr. Griffith, for 5 minutes.

Mr. GRIFFITH. Thank you, Mr. Chairman. Appreciate that.

Mr. Norris, earlier you were speaking with Ms. Castor, and you started talking about that people were worried about building coal-fired power plants because of legislation. Could you expand on that for me?

Mr. NORRIS. I think there is a general concern that there will be at some point in time, a cost put on carbon. Because of the uncertainty of when that will happen and what that will be, combined with the other factors in place right now that I have talked about in my testimony, natural gas prices, EPA rules, State requirements, that it is just too risky for investment into coal-fired generation. And, frankly, nuclear is suffering some of the same problems strictly on the cost aspect.

Mr. GRIFFITH. So while natural gas is a concern because the prices are lower right now, looking forward, natural gas and coal have competed over the decades and that would probably continue, but with already existing newly proposed EPA regulations and the fear that either legislation or additional EPA regulations are major causes as to why no one's really looking at building a new coal-fired power plant. Is that correct? Is that a fair statement of generally what you said?

Mr. NORRIS. Yes. I think some of the existing facilities are being retired because new—massive—

Mr. GRIFFITH. The new—right.

Mr. NORRIS. But the primary concern that was expressed to me is that—the anticipation at some point, there will be a cost on carbon, and that makes the economics difficult to finance coal plants.

Mr. GRIFFITH. All right. And then let me ask about, to anyone who wishes to answer, all of you, PJM and the other markets, have you all done any studies to determine whether or not those markets have actually lowered the costs of electricity coming to the consumer?

Ms. LAFLEUR. Yes. We get regular reports from the markets and their market monitors and a—the years are running together, but within the recent past, we compiled a major set of metrics from the different RTO's that included cost metrics over time, and there were, I know, within PJM and the other eastern markets cost reductions. Now, they are, in part, driven by the cost reductions in gas being used to generate the electricity, but we also looked at the transmission congestion and how that was coming down. So we could provide an update on that in written form as well.

Mr. GRIFFITH. All right. That would be great, and I appreciate that.

Have any of you had contact with the White House regarding the President's climate action plan?

Ms. LAFLEUR. Not me.

Mr. MOELLER. No.

Mr. NORRIS. I don't believe so.

Mr. CLARK. No.

Mr. GRIFFITH. Well, isn't that interesting. So they didn't talk to you all about that? I guess, if they didn't talk to you about it, they just—nothing else you can say about it, I suppose.

Ms. LAFLEUR. I mean, in my view, we function as an independent agency. They don't give us policy guidance, at least never in my experience. They did call to make me acting chairman, which I very much appreciate, but didn't say anything about how to vote on anything.

Mr. GRIFFITH. Well, and I wasn't really asking, you know, whether or not they had called you about how to vote on things, but I am just curious that they came out with this major plan and didn't discuss with you, and what I am talking about, get advice or seek input or anything like that. So you didn't have those conversations either? So maybe I wasn't clear when I asked it the first time around.

Ms. LAFLEUR. I do coordinate with the Department of Energy on the electricity advisory committee, but their efforts are more around transmission, storage, some other areas. I think the climate plan came from other parts of the administration.

Mr. GRIFFITH. OK. So then I guess it would be fair to say that they didn't seek any information from you-all on how this might affect electric prices for the average American family?

Ms. LAFLEUR. The White House didn't seek any information from me.

Mr. MOELLER. Nor I.

Mr. NORRIS. I am going to assume they didn't contact me because we are an independent agency, not because they didn't know we existed.

Mr. CLARK. No, I wasn't contacted.

Mr. GRIFFITH. All right. Well, I don't have any additional questions. Thank you very much for being here today. And, Mr. Chairman, with that, I yield back.

Mr. WHITFIELD. The gentleman yields back. At this time I recognize the gentleman from Illinois, Mr. Kinzinger, for 5 minutes.

Mr. KINZINGER. Thank you, Mr. Chairman.

And thank you all for being here. Competitive markets tend to be the most efficient when a light regulatory approach towards rules and regulations are in place. Given that the process as put in place by FERC impacts tens of millions of consumers, it is my hope that your Commission will work with all parties to ensure that all aspects of industry are taken into account in order to ensure that current and future energy demands are able to be met.

It is my understanding that FERC is in the process of evaluating market mechanisms in a holistic fashion in a subset of the capacity markets in which it regulates. I appreciate the Commission taking on this effort, but I have a few concerns that I would like to discuss in order to determine where this effort may lead and whether or not it may be unnecessarily limited.

Chairman LaFleur, what does the Commission intend to do with the information it is currently gathering in this proceeding?

Ms. LAFLEUR. I think on the capacity markets, that is very much a work in progress that is going on right now, but I think potentially, an illustrative example is what we have done on gas electric where we have looked at a large number of comments from around

the country and said, here is a large set of them that have to be handled regionally, and we will continue to deal with it with each region of the country, but here are a couple of cut-across issues we may look at across more than one region, and that may well be the future capacity markets, but I think I want to read the comments and talk to my colleagues.

Mr. KINZINGER. Have you discussed the possibility of expanding this effort to include other wholesale capacity markets that the Commission regulates, and is there a specific reason for limiting the inquiry if, in fact, you have the capacity markets alone?

Ms. LAFLEUR. There was a reason to limit the technical conference to the three markets: because they operate in largely parallel fashion, they are more mature. The Midwest ISO voluntary capacity market is considerably newer, and we thought it might be difficult to do them all in one day, but there is certainly no reason we won't in the future be looking at other places as well if the need arises.

Mr. KINZINGER. OK. Baseload electric generating assets have a life span of 40 to 60 years. The forward capacity markets and organized electricity markets typically operate 3 years ahead. Ms. LaFleur and Mr. Norris, let me ask you these questions. Do you agree that there is a fundamental mismatch between the investment recovery profile of electric generating assets and the way merchant markets are structured, and do you believe FERC has a role to play in addressing this problem? Mr. Norris first.

Mr. NORRIS. By markets, you mean capacity markets?

Mr. KINZINGER. Yes.

Mr. NORRIS. Yes. There is a disconnect. The capacity markets are really designed to make sure there are adequate resources and the reserve margin will be met for the long-term future. I think some of our current capacity constructs were largely put in place to provide a revenue stream for generators that were spun off in a lot of the restructuring areas, and there has been a cushion of time there for that to play out. We are reaching into that cushion now. We have got to look at these capacity markets and play a role in structuring them so long-term supply is available for adequacy.

Mr. KINZINGER. And, Chairman LaFleur, do you have any anything to add on that?

Ms. LAFLEUR. Well, I think the reason we are looking at capacity markets is largely to see if they attract the investment we need, and that includes, you know, baseload, peaking, intermediate, demand response, all the things you need to run a grid, and that is what we will be looking at.

Mr. KINZINGER. Does your Commission have plans to review and improve market rules so that wholesale markets are given the proper signals to allow for investment decisions to be made in the power sector?

Ms. LAFLEUR. Well, that is the purpose of the wholesale market rules in part—to attract the investment for reliability—so I think that is very much within our responsibility.

Mr. KINZINGER. And then finally, Mr. Clark, do you think the Federal Power Act authorizes FERC to subsidize long-distance transmission of remote wind power over potentially cheaper local renewables?

Mr. CLARK. I don't think it authorizes, Congressman, the Commission to subsidize such lines. I think it charges the Commission with trying to make a reasonable attempt at allocating costs on a commensurate basis on a cost-causation beneficiary principle. I think the Seventh Circuit through the course of a couple of major cases has basically given us the goalposts in terms of what our responsibilities are in terms of assigning those costs.

Mr. KINZINGER. OK. Thank you all for your time.

Mr. Chairman, I will yield back 36 seconds.

Mr. WHITFIELD. Thank you very much. At this time I will recognize the gentleman from Texas, Mr. Hall, for 5 minutes.

Mr. HALL. Mr. Chairman, thank you.

And Commissioners, I thank you for appearing here today. If I ask questions that have been touched on earlier, I have been another committee. We are all trying to pass everything we can before getting to go home for Christmas.

I have been hearing about a new technology that is coming onto the market, and I am from Texas and, of course, have great interest in energy. Probably other than "prayer," it is the most important word in the dictionary for young people. And they have no jobs today, and if we go on the way we are going now, there will be no employers in about a year, so you have a very important job.

That new one, manufacture the solution out of gas liquids to make it easy to transport to a customer, who then treats it and then uses it as a fuel or feed stock or electric generation, whatever they want, and I am told that it is a new technology that can be used relatively small, simple equipment that is often modular and can be moved from site to site in an oil field, which is important to them, to capture stranded gas that Mr. McKinley had an interest in, or they can be installed within existing port facilities.

I hope FERC can ensure new beneficial technologies like this are not subjected to the same time-consuming and expensive review process as the major projects, say, such as LNG. Some of these new technologies don't always fit the rules that you have, they are all forced to fit into a category, but just because you are supposed to regulate and you feel that you have to regulate them, the new businesses are going to be stifled or it will never get off the ground. I hope you won't feel that you have to conjure up ways to regulate something if you haven't been told to regulate it by an act of Congress. And that is kind of a question that is not meant to be insulting in any way, because I admire you.

And do you have any short statement you want to make to what I have said so far?

Ms. LAFLEUR. Well, I believe we have to stay in our jurisdiction. As has been observed several times today, we have been given quite a lot of it. We are not short of things to do. And that is what we try to do, is follow the law.

Mr. HALL. And I expect you to do that.

Mr. CLARK. Yes. Congressman, I would just add, I agree with Chairman LaFleur. Coming from North Dakota as I do, where we have a significant concern with flared gas, and I understand—

Mr. HALL. You have a role to play there.

Mr. CLARK. Yes. I understand the technology that you are talking about, and I am intrigued by it, but I would share your concern

that anything that we can do to advance technologies that allow us to capture and utilize valuable resources is something we should do.

Mr. HALL. Well, we go back some 20, 25 years that some of us have been up here. And if you remember, we passed Clean Air Acts and Clean Water Acts, and took several sessions to do them. And we breathed life into the EPA in those. I remember that. Even though I was a Texan and believed in energy, and energy paid 55 or 60 percent of the taxes that were paid in Texas, we felt that it was very important. And we breathed life into the EPA by giving them a role in that act.

I am kind of sorry now that we did, because they acted well then and we were pleased with what they did, and we thought, even though we were energy oriented, that the energy people needed some supervision, but they also needed some help that the Federal Government can give. So they now hurt us by overregulation, and that is what I was asking you about, I guess.

And, Acting Chairwoman, a key goal in FERC's strategic plan 2009 to 2014 calls for safe, reliable and efficient infrastructure development to integrate these resources. Are you supportive of FERC's—have you been there 3 weeks, you say?

Ms. LAFLEUR. No. I—

Mr. HALL. Golly, you—

Ms. LAFLEUR. I have been 3-1/2 years, so I—

Mr. HALL. I would hate to cross-examine you—

Ms. LAFLEUR. I have only been in this job 2 weeks.

Mr. HALL. All right. Well, you are doing very well, and I thank you for that, because you have given—are you supportive of FERC's goal for infrastructure development included in this plan?

Ms. LAFLEUR. Yes, I am. I think it is an important part of what we do.

Mr. HALL. And what kind of enhancements or changes would you consider on this goal?

Ms. LAFLEUR. Excuse me?

Mr. HALL. Do you have any changes you'd make? Maybe you haven't had time. Maybe the other gentlemen might.

Ms. LAFLEUR. When I looked most recently at the strategic plan, it is written at a very high level, and I think most of it is things like just and reasonable rates and a robust infrastructure, which I do not think there would be any need to change.

I think, as I said, as we look at the current situation of where the country is, I want to meet with my colleagues and figure out are there things that we need to give more priority to. And I think I will be very accountable for that, but I want to do a little bit of work before I answer, if possible.

Mr. HALL. Commissioner Moeller, Mr. Clark, if the administration continues down this part of taking fuel-of-choice decisions away from the electric industry, as I am told that they do, and reducing fuel diversity, what negative consequences would you expect?

Mr. MOELLER. Well, we just have to watch reliability very, very closely. A number of us have made references to the midwest, but it is just not the midwest. In the next few years and the next few

summers, very concerned about making sure that we have resource adequacy.

Mr. HALL. And to the acting—my time up?

Mr. WHITFIELD. I am sorry, Mr. Hall.

Mr. HALL. Well, I guess I will yield back, then.

Mr. WHITFIELD. We were all so mesmerized by your comments that I forgot the time, too.

But at this time I would like to recognize the gentleman from Nebraska, Mr. Terry, for 5 minutes

Mr. TERRY. Thank you, Mr. Chairman. And I am your favorite witness, the last.

So, Mr. Norris, I want to follow up with you because part of the discussion today has been about a carbon price being built in that the carbon price is based on the uncertainty of what is going to happen regarding carbon. That intrigues me, what you were talking about, because yesterday I was hit up by a reporter that asked me a similar question about energy companies already starting to build in a carbon price. And of course the question then from the reporter is, what are you guys doing in Congress about a carbon price? And I said, nothing, we aren't trying to artificially inflate, at least legislatively, energy prices, nor overtly through a tax.

So it begs the question, since there is a lot of discussion about now building in a carbon price, is there discussions in FERC that you have been involved with or know about as an overt attempt to either raise prices based on carbon or any other thing that would, in essence, increase cost based on carbon?

Mr. NORRIS. In short, no. The reason for my comments in my testimony here today is to make you aware I think that is a major factor in some of the change happening in our energy landscape right now, is the uncertainty about when or if there will be a price on carbon.

Mr. TERRY. Well, and I think there is some merit to the "if," because there are a lot of people that are pushing that. There is no legislative attempt. But it also begs the next level of question, with natural gas in particular, and you just had some discussions about flaring in North Dakota. I have pictures on my iPhone of that when our subcommittee took a little trip up there.

So we are burning it off, we have got an ample supply. But I think there is some uncertainty in that area as well based on some environmental groups and even some people on this committee that would like us to stop using the technology of hydrofracturing.

Have any of you had discussions in there about any policy impacts on hydrofracturing, how that could impact the reliability and affordability of electrical generation in the United States? And let's start with the Acting Chairwoman.

And congratulations. That is a good call from the White House. I am just looking for any call from the White House on any of the issues I have asked them to talk to me about. But that is a issue for a different day.

Ms. LAFLEUR. We don't regulate hydraulic fracturing. We have been asked in some of our gas pipeline cases to evaluate the environmental impacts upstream and downstream, and we have taken a pretty strong line under the National Environmental Policy Act to just look at the impact of the project we are certifying.



I think as part of the discussion of fuel diversity and gas-electric there has been general discussion of should the rules change at any time on natural gas, you know, we have to be alert to that because that could affect reliability, but no direct impact on it.

Mr. TERRY. Well, let's take that, because one of the discussions we have had with FERC in the past has been the coordination with FERC, particularly on natural gas with the other entities, EPA for example, reliability. How is that work going of everyone trying to get on the same page in regard to natural gas?

Chairwoman.

Ms. LAFLEUR. Most of the discussions I have been present with on the EPA have been about specific suites of regulations that we have discussed, MATS and so forth. I stay alert to discussion of regulation of natural gas, but I have not been part of the discussion of fracking.

Mr. TERRY. Well, no, this is just on natural gas in general, and reliability, because there is going to be an issue, as some of these plants are unable to use coal because of the new standards that are being produced, and there will be a time when they either shut down or move to natural gas. That is going to affect reliability. And I assume those discussions are occurring with the EPA and other agencies so that you that you know that this is going to happen and how you are going to deal with it.

Ms. LAFLEUR. Well, should there be a time when I have any reason to believe the natural gas supply is going to be interrupted, I would certainly take part in those discussions. Everything we are seeing—

Mr. TERRY. Well, this will be more about the down time of plants, to either shut down or the shutdown to retrofit. Because you can't gut a coal-fired plant and have it still running while you are putting in a whole new system.

Ms. LAFLEUR. Well, on that we have had discussions, and I think that is one of the reasons that the EPA gave us, among others, a consultative role if a plant needs more time to retrofit under the MATS standard.

Mr. TERRY. Well, even if you give them more time to retrofit it is going to be down time during the retrofit. So we are going to have issues of electrical generation not existing in certain areas.

Mr. WHITFIELD. The gentleman's time has expired. I am very sorry to say you are not going to be the last person to ask questions, Lee.

Mr. HALL. Mr. Chairman, can I make an inquiry of you? I didn't get to ask everything I wanted to, but I didn't know what had already been asked. Would you ask to leave the record open for a couple of weeks if we mail a direct question to them—

Mr. WHITFIELD. Absolutely.

Mr. HALL. We have had problems about the natural gas sector and the electricity sector. Thank you, Mr. Chairman.

Mr. WHITFIELD. Yes. We will have it open for 10 days and work with you to get the questions to the Commissioners.

So at this time I recognize the gentleman from New York, Mr. Engel, for 5 minutes.

Mr. ENGEL. Thank you, Mr. Chairman. And I won't take 5 minutes. I was here before and I had to run out.

I just really have one question. I would like to focus on the Champlain Hudson Power Express. I am sure you are aware that I and others have spent many years speaking out in favor of closing the Indian Point nuclear power plant in New York. I am not opposed to nuclear power, and I never spoke a word about closing the plant until after September 11th, when I learned that one of the planes that hit the towers flew right over this power plant, which is probably about 10 miles out of my district.

I believe, and so does our governor and all the elected officials in the surrounding area, Members of Congress who represent the area in Westchester County, we think it presents one of the most serious safety and environmental threats facing the New York metropolitan region.

But New Yorkers no longer really need to face this threat because the Champlain Hudson Power Express would deliver 1,000 megawatts of power to the New York metropolitan region. And with the implementation of the Champlain Hudson Power Express, security of New York's electric grid would be increased and New Yorkers would no longer have to live with the dangers of Indian Point in their own backyard.

It is obviously a benefit to New York, and the safety of New Yorkers is obviously all of our concerns. And given the great benefits of the project, I really believe that it is important that it is implemented in a timely manner.

So my only question is really in our effort to plan for a post-Indian Point New York, I am sure that we have to make sure that we have sufficiently reliable, safe energy to replace the nuclear facility because when some of us said that it should be closed, people came back with, well, what are you going to do to replace it? So I believe the Champlain Hudson line provides a portion of that energy. And I would like to hear from any of you regarding the status of the project.

Madam Chair.

Ms. LAFLEUR. Thank you, Mr. Congressman. I believe about a year ago, within the past year, FERC issued an order approving market-based rates for the Champlain Hudson line. No one sought rehearing of that order, so it is final, so we did the rate making. I believe the siting of the line is being done in New York State, and so I don't think we have any anything open on the line right now. But we got out the order that they needed for their rates.

Mr. ENGEL. Thank you.

Anybody else have anything to add.

Mr. MOELLER. Congressman, I think it points to the fact that transmission is such a good technology because it can solve a multitude of challenges going forward. And so I again want to stay positive on the need for more transmission investment. This is a local example that has regional benefits. We can duplicate that in many areas of the country.

Mr. NORRIS. Thank for the question. Yes, I echo my colleagues' comments, we have dealt with that line, given it negotiated rate authority as a merchant transmission line. I think it is a great example of the wealth or abundance of hydroelectric facilities, of possibilities coming down from Canada that could meet a lot of our

long-term needs with low emissions, or no emissions, but also transmission will be key to making it happen.

The second point would be, as you talk about your nuclear facility, I am very sensitive to the decisions of New Yorkers about that plant. We are also facing a close down of the San Onofre plant in California. Just a heads-up: Replacing those large facilities in huge urban centers is going to require some other infrastructure to replace it. So we are going to need support, and developers are going to need support for building that infrastructure to replace those generation facilities. That is not easy to do in today's environment.

Mr. CLARK. I would concur with my colleagues and don't have anything to add.

Mr. ENGEL. OK. Thank you all very much. I appreciate the answers.

Thank you, Mr. Chairman.

Mr. WHITFIELD. I will make one just comment on this. You referred to the closing of the nuclear plant down in southern California, and California has the 33 percent renewable mandate. And I was talking to one of the CEOs of one of the majority utilities out there. And as they build new transmission lines to bring in renewable power to where they need it, they are getting in some instances specific instructions relating to going underground on the transmission lines, which raises a lot of technical issues. And this CEO informed me that the mileage that they are going underground is costing his utility \$100 million a mile. So we are talking about some costly situations in some cases.

At this time, I recognize the gentleman from Texas, Mr. Olson, for 5 minutes.

Mr. OLSON. I thank the chair. And I thank you, sir, for your patience. I can assure you that I will take only a maximum of 4 minutes and 59 seconds of my time.

Welcome to the witnesses. Chairwoman LaFleur, Commissioner Moeller, Commissioner Norris, Commissioner Clark, welcome. Happy holidays.

I have one question, and it is about the production tax credit. I will start with you, Commissioner Moeller.

As you know, for the next 10 years some wind turbine owners will get tax credits for every hour they run. This tax credit was designed to kick start renewables. And yet it lives on despite wind being a major part of the grid, at least 12 percent in my home State of Texas capacity coming from wind. But some markets have seen, quote/unquote, prices as low as negative \$41 per megawatt hour as operators get the credit and run whether the power is needed or not.

Now granted, that is an extreme example, but they can suffer a loss and taxpayers make them whole. That moves markets. Back home, our lack of new power construction in Texas, our public utility commissioner Chairwoman Nelson has said, and this is a quote, the market distortions caused by renewable energy incentives are one of the primary causes. This distortion makes it difficult for other generation types to recovery their costs and discourages investment in new generation. And while the PTC isn't the only driver of market distortions, it is a significant force.

So starting with you, Commissioner Moeller, do you agree that incentives for renewables distort energy markets?

Mr. MOELLER. Congressman, I think all subsidies distort markets.

Mr. OLSON. Chairwoman LaFleur, any comment, ma'am?

Ms. LAFLEUR. In a pure market there would be no tax subsidies, but many of the resources that fit into the market have tax subsidies of one sort or another that are not taken into account in the market price.

Mr. OLSON. Commissioner Norris, you are up, sir.

Mr. NORRIS. I echo my colleagues' comments. I agree any tax implication is going to affect an open marketplace. Having said that, I am concerned that some of the nuclear facilities that have been closing or looking at retiring because of negative nighttime pricing is a concern for me because I think of the long-term stability of those as baseload fuel, and baseload plants in our system is important.

Mr. OLSON. Yes, we need those. Yes, sir.

And, Commissioner Clark, you are our last hitter, sir. Clark.

Mr. CLARK. I would agree and for the reasons that you have identified. Obviously it is a decision for Congress to make whether there will be a PTC or not, it is not FERC's, but clearly it does have a market-distorting impact, especially in very wind-rich parts of the country and at certain times of day and at certain times of the year.

Mr. OLSON. And one final question, it is a yes-or-no answer, and following up on my colleague Mr. Green's questions about our grid liability bill we passed here in Congress. Yes or no, does everyone out there still agree that it is bad policy to trap companies between two different regulators with different goals during power crisis?

Chairwoman LaFleur.

Ms. LAFLEUR. Yes. I think it is bad policy and I supported—you are talking the Hobson's choice bill?

Mr. OLSON. Yes, ma'am, our grid bill.

Ms. LAFLEUR. I supported the basic principle that if the DOE orders you to run, you should not face sanctions for that in that limited instance.

Mr. MOELLER. I strongly, strongly support the concept, especially with what we are hearing about in the Midwest and to some extent Texas.

Mr. OLSON. Yes, sir.

Commissioner NORRIS.

Mr. NORRIS. I think it puts people in an unfair position.

Mr. CLARK. I would concur, and I have been supportive in the past of the bill that you and Congressman Doyle have sponsored.

Mr. OLSON. Thank you. I yield back the balance of my time. I am 41 seconds early, sir.

Mr. WHITFIELD. Yes. Thank you very much. We appreciate that.

Well, that concludes today's hearing. I would like to ask Ms. LaFleur one additional question.

Recently it was brought to my attention that FERC has jurisdiction over a number of lakes around the country in which hydropower is being produced, and a decision affecting the Lake of Ozarks and about tearing down some houses and whatever and

then went out at the Grand Lake in Oklahoma. Would you be able to identify for the committee the name of an individual at FERC that would have up-to-date information on the authority and jurisdiction that you all have over these lakes in which hydropower is being produced? Not right now, but later.

Ms. LAFLEUR. Yes. Absolutely.

Mr. WHITFIELD. OK. Thank you.

And without objection, and hopefully you all have seen this, we have a letter from the American Public Power Association, a statement that they would like to insert into the record. Without objection. So that is entered.

[The information follows:]



**American  
Public Power  
Association**

Ph: 202.467.2900  
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[www.PublicPower.org](http://www.PublicPower.org)

1975 Connecticut Avenue, NW  
Suite 1200  
Washington, DC 20009-5715

**Statement  
Of the  
AMERICAN PUBLIC POWER ASSOCIATION  
Submitted to the  
ENERGY AND COMMERCE SUBCOMMITTEE ON ENERGY AND POWER  
For the December 5, 2013, Hearing on  
“Evaluating the Role of FERC in a Changing Energy Landscape”**

(Submitted December 4, 2013)

The American Public Power Association (APPA) appreciates the opportunity to submit this statement for the record in relation to the House Energy and Commerce Committee’s Energy and Power Subcommittee hearing on “Evaluating the Role of FERC in a Changing Energy Landscape.”

APPA is the national service organization representing the interests of over 2,000 municipal and other state- and locally-owned, not-for-profit electric utilities throughout the United States (all but Hawaii). Collectively, public power utilities deliver electricity to one of every seven electricity consumers (approximately 47 million people), serving some of the nation’s largest cities. However, the vast majority of APPA’s members serve communities with populations of 10,000 or less.

Overall, public power utilities’ primary purpose is to provide reliable, efficient service to local customers at the lowest possible cost, consistent with good environmental stewardship. Public power utilities are locally created governmental institutions that address a basic community need: they operate on a not-for-profit basis to provide an essential public service, reliably and efficiently, at a reasonable price.

APPA commends you for holding a hearing on the issues surrounding the legal and regulatory authorities of FERC and the manner in which it has been carrying out its statutory duties. The country faces numerous challenges to the provision of electricity in the near future, including retirements of coal and nuclear power plants; dramatic increases in variable renewable energy resources and the integration challenges they present; an increasing reliance on natural gas; and the slow development of additional hydropower resources including the difficulties with mandatory conditioning authority. All of these issues are troubling to APPA and its members. We are also concerned about the inability of FERC and the Commodity Futures Trading Commission (CFTC) to reach an agreement, as mandated in the Dodd-Frank Wall Street Reform Act, on how to share the information necessary to oversee electricity markets, so that market abuses are identified and mitigated. The CFTC must oversee a derivatives market in which quadrillions of dollars of transactions are made annually. FERC, with twice the staff, has the sole task of overseeing the U.S.’s \$153 billion electricity market. Clearly, FERC has the resources and expertise to perform this essential task, and APPA supports FERC’s efforts to clarify its regulatory and enforcement role with the CFTC. While these issues, among others, are important to public power, APPA’s major issue of concern with FERC, and therefore the focus of this statement, is its ill-advised, continued support of mandatory capacity markets run by Regional Transmission Organizations (RTOs).

**Mandatory Capacity Markets Have Raised Electricity Prices with Little New Electric Generation Capacity in Return**

To ensure reliability and protect the economy from unnecessary electricity price increases, major reforms are needed to the mandatory capacity markets operated by the RTOs in three regions of the country – the Northeast, New York, and the Mid-Atlantic/Mid-West. These RTO operated constructs are often termed “competitive” or “organized markets,” yet true competition does not exist. APPA and many others have concluded that the basic capacity procurement construct is not a “market” in any meaningful sense of the word. It is instead centralized procurement based on a heavily administered pricing structure governed by thousands of pages of complex rules. The failure to recognize this reality has led FERC to agree to proposals in these markets that only exacerbate costs and impede needed new resource development.

The “classic,” and historically successful, way to finance capital intensive investments is through long-term bilateral contracts that support financing by providing assured cost recovery. However, this model has been upended in these mandatory capacity markets, overseen by FERC. In addition, because new supply development increases competition, the primary beneficiaries of the capacity markets – incumbent owners of older, less efficient power plants – have sought and received approval from FERC for the RTOs to implement new rules that create impediments to new supply. These recent changes to the capacity market rules, known as Minimum Offer Price Rules (“MOPRs”) or “buyer-side mitigation,” administratively impose floor prices on such new generation, and have weakened the ability of the states to make decisions on their energy future and of public power utilities to fulfill their obligation to provide reliable electric power at the lowest reasonable cost. To further exacerbate the concerns of public power utilities and others, the buyer side “market power” that FERC is attempting to mitigate has never been demonstrated to exist.

When the capacity markets were implemented, public power and cooperative utilities and a number of states carefully negotiated provisions that exempted self-supply and state-procured resources from such buyer-side mitigation. Unfortunately, FERC has since chosen to ignore these negotiated settlements, and to remove such exemptions. As a result, these local utilities face the potential for double cost exposure – the cost to construct a plant and a potential additional cost to buy the same power from the market if the mitigated offer price does not “clear” the relevant capacity auction – making it much more difficult and costly to finance such new resources.

An example of a problematic FERC decision concerns a highly efficient combined-cycle natural gas plant that replaced an older plant in the Astoria neighborhood of Queens in New York City. FERC found the competitive procurement process that the New York Power Authority (NYPA) had conducted for the Astoria II contract to be “discriminatory” because it was limited to new resources, even though its express purpose was to replace an existing unit in a transmission-constrained area. As a result, FERC ordered the NYISO to replace the actual cost of capital used to finance the plant with a higher proxy cost of capital, resulting in a mitigation of the plant’s offer into the market and an increase in costs to consumers.

These capacity market decisions reflect APPA’s broader concern that FERC often accepts market proposals from the incumbent generation owners that are only aimed at maintaining their revenues and reducing competition – the exact opposite of how a robust, competitive market functions, and a shift away from the mandate under the Federal Power Act for FERC to ensure that wholesale market rates are “just and reasonable.” When formulating its positions, FERC frequently ignores the complete lack of evidence that the restructured markets operated by RTOs are actually markets in the first place or that they have provided real benefits to consumers and the economy. FERC should take a more critical and holistic view of these markets, and pursue fundamental reforms that reduce the adverse impact on reliability and electric consumers, including removing mandatory requirements for participation in these capacity markets.

Thank you again for this opportunity to submit a statement for the record.

CONTACT INFORMATION:

**American Public Power Association**  
1875 Connecticut Ave. NW, Suite 1200  
Washington, D.C. 20009

Contact:  
Seth Voyles

[REDACTED]  
[REDACTED]



Mr. WHITFIELD. And we will keep the record open for 10 days because, as Mr. Hall and others said, there are a few additional questions we would like to submit to you all.

But I want to thank you for coming up today and visiting with us and for the exchange that we had. And thank all of you for what you are doing and continue to do in addressing these important issues.

And with that, that will conclude today's hearing. Thank you.

[Whereupon, at 11:48 a.m., the subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
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Majority (202) 225-2927  
Minority (202) 226-3641  
January 10, 2014

The Honorable Cheryl A. LaFleur  
Acting Chairman  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Dear Acting Chairman LaFleur:

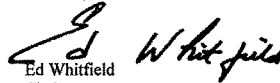
Thank you for appearing before the Subcommittee on Energy and Power on Thursday, December 5, 2013, to testify at the hearing entitled "Evaluating the Role of FERC in a Changing Energy Landscape."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Friday, January 24, 2014. Your responses should be e-mailed to the Legislative Clerk in Word format at [Nick.Abraham@mail.house.gov](mailto:Nick.Abraham@mail.house.gov) and mailed to Nick Abraham, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

  
Ed Whitfield  
Chairman  
Subcommittee on Energy and Power

cc: The Honorable Bobby L. Rush, Ranking Member,  
Subcommittee on Energy and Power

Attachment

**FEDERAL ENERGY REGULATORY COMMISSION**  
WASHINGTON, DC 20426

OFFICE OF THE CHAIRMAN

January 24, 2014


The Honorable Ed Whitfield, Chairman  
Subcommittee on Energy and Power  
House of Representatives  
Committee on Energy and Commerce  
2125 Rayburn House Office Building  
Washington, D.C. 20515

Dear Chairman Whitfield:

Thank you for your January 10, 2014 letter containing additional questions for the hearing record on "Evaluating the Role of FERC in a Changing Energy Landscape."

Enclosed please find my responses to your questions. I want to thank you again for the opportunity to appear before the Subcommittee on Energy and Power on December 5, 2013.

Sincerely,



Cheryl A. LaFleur  
Acting Chairman

cc: The Honorable Bobby Rush, Ranking Member  
Subcommittee on Energy and Power

Attachment

**Additional Questions for the Record**

**The Honorable Ed Whitfield**

**1. Under former Chairman Wellinghoff, FERC's "top initiatives" included: 1) smart grid; 2) demand response; 3) integration of renewables; and 4) Order No. 1000 - transmission planning and cost allocation.**

**a. In light of Chairman Wellinghoff's departure, how might you redirect FERC's priorities during your tenure as Acting Chairman?**

Answer: My goals as Acting Chairman are to understand all perspectives, to work to achieve consensus with my colleagues, and to make objective decisions on the record. With those goals in mind, I have three top initiatives. First, electric grid reliability and security have been a priority of mine since I joined FERC as a Commissioner three-and-a-half years ago. Both the mandatory reliability standards and the process through which those standards are developed have improved in recent years, and I look forward to working closely with NERC to make further progress in these areas. Second, I want to focus on ensuring that the wholesale electric markets work efficiently as the industry sees changes in power supply stemming from various factors such as shale gas development. There is an increasing pressure on competitive electric markets as we enter an investment cycle in which such factors are stressing the system. I believe the Commission must ensure that the markets work fairly to give appropriate investment signals to base load, mid-merit, peaking and variable generation, as well as demand response and energy storage technologies. Third, I want to help ensure that the Commission's rules facilitate robust infrastructure for both the electric and natural gas industries to serve customers.

**2. Under your leadership, how might the Commission's work differ from that of former Chairman Wellinghoff on the following critical issues:**

**a. Order 1000 transmission planning and cost allocation?**

Answer: The Commission's work with respect to Order No. 1000 is now focused on implementation. As I stated at the hearing, implementing this rule will be a significant part of our work going forward. Throughout the first half of 2013, the Commission issued orders on each transmission planning region's proposals to comply with the regional transmission planning and cost allocation requirements of the Final Rule. Additional compliance filings responding to the Commission's findings in those decisions have been filed, and the Commission is currently reviewing them. In addition, the Commission is reviewing proposals to comply with the interregional transmission planning and cost allocation requirements of Order No. 1000.

**b. Natural gas pipeline permitting?**

**c. LNG siting?**

Answer: In general, FERC acts on both pipeline and LNG projects applications expeditiously. About 92 percent of applications are acted on within a year. To date, and in light of this record, I have not identified specific changes that I believe are needed at this time. However, I am always open to looking for ways to improve the Commission's processes.

**d. Organized wholesale electricity markets?**

Answer: I will continue to focus the Commission's resources on ensuring that the rules that govern organized wholesale electric markets promote the delivery of reliable power and are non-discriminatory and resource-neutral, resulting in efficient price signals that market participants can rely on to make investment decisions. Particular matters of focus will include: the Commission's ongoing inquiry regarding the performance of the current centralized capacity markets in the Eastern RTO/ISOs, building on a technical conference held last fall and subsequently filed comments; implementing recent rules addressing the integration of variable energy resources into the grid and ancillary service reforms; and timely action on the wide range of issues that arise in rate and tariff filings and complaints placed before the Commission by market operators and market participants. A vital goal with respect to all of these areas is ensuring that electricity can be reliably delivered in the long-term as system needs change.

**3. The President has directed EPA to issue proposed regulations limiting emissions of greenhouse gases (GHG) from existing fossil fuel electric generation units by next June.**

**a. Have you or anyone at FERC had discussions with any EPA or DOE staff, or provided them information, regarding the potential reliability or price impacts of EPA regulation of GHGs from existing fossil fuel units?**

Answer: I have not provided EPA or DOE staff any information with respect to specific reliability or price impacts of EPA regulation of GHGs from existing fossil fuel units. I have had general discussions with EPA and DOE regarding the need for FERC to remain engaged as environmental regulations are issued to help maintain reliability and ensure that markets adapt. I have served with Commissioner Moeller as one of FERC's leaders of the FERC/NARUC Forum on Reliability and the Environment, which has provided a structure for conversations concerning these issues. In addition, FERC staff has met with staff from EPA and DOE concerning the upcoming proposed rules regarding GHGs from existing generators. However, those rules have not yet been proposed, and my understanding is that the staff discussions did not address specific reliability or price impacts of those rules. My understanding is that FERC, EPA and DOE staff intend to continue these discussions as the future rules develop. Finally, FERC staff participates in regular conference calls with the RTOs to discuss their efforts to plan the system to meet future needs, including implementation of EPA rules.

**b. Are you aware of EPA or DOE conducting any analysis of the potential reliability or price impacts of potential GHG regulations for existing fossil fuel units? If so, what is the content of such discussions and information?**

Answer: No, I am not aware of any such analysis. However, the rule has not yet been proposed.

**4. Why does Order 1000 permit customers to be charged for transmission lines built by entities their utility does not take service from?**

- a. Do you support allocating costs for new transmission lines to entities that don't have a customer or contractual relationship with the builder of the line?**
- b. Please identify the section of the Federal Power Act that gives FERC this authority to allocate costs in the absence of a contractual relationship?**

Answer: A central theme of Order No. 1000's cost allocation reforms is that only those that benefit from new transmission facilities developed under Order No. 1000 planning processes should be allocated the costs for those facilities under the region's cost allocation method. I strongly support that principle. It is also important to note, as Order No. 1000 found, that those who benefit from a new transmission facility under Order No. 1000 do not necessarily have a contractual relationship with the utility or developer building that facility. Electricity flows over the transmission grid according to the laws of physics, and not pursuant to voluntary agreements of those who provide and receive transmission service. As Order No. 1000 recognizes, a robust grid with additional capacity and alternative paths for flows of electricity helps bolster grid reliability, reduces congestion in a way that may lower costs for consumers, and can help regions meet public policy requirements. Therefore, reliability benefits, for example, may be realized in the absence of voluntary arrangements. In addition, Order No. 1000 directed public utility transmission providers to consult with their stakeholders in developing cost allocation methods that would appropriately identify the beneficiaries of new transmission facilities in their region in a clear, upfront manner. Thus, Order No. 1000 provided each transmission planning region the flexibility to develop a regional cost allocation method, so long as the method was consistent with certain cost allocation principles, including that the costs allocated are roughly commensurate with benefits.

In Order No. 1000, the Commission relied on the provisions of the Federal Power Act – sections 205 and 206 – that obligate the Commission to ensure that jurisdictional electric rates are just and reasonable and not unduly discriminatory or preferential. In addition, the Commission explained that section 201(b)(1) of the Federal Power Act grants the Commission jurisdiction over the transmission of electric energy in interstate commerce, as well as jurisdiction over all facilities for the transmission of electric energy.

**5. Please identify the provisions in the Federal Power Act that give FERC authority over local and regional transmission planning? Please define "region" for the purposes of Order 1000? Please define "benefit" for the purposes of Order 1000?**

Answer: Sections 205 and 206 of the Federal Power Act obligate the Commission to ensure that jurisdictional electric rates are just and reasonable and not unduly discriminatory or preferential. Order No. 1000 concluded that regional transmission planning is a practice that affects jurisdictional rates. Moreover, Order No. 1000 builds on the Commission's earlier Order No. 890, which established transmission planning requirements for individual public utility transmission providers at the local level.

Order No. 1000 did not prescribe the size of a transmission planning region, except to state that a single public utility transmission provider by itself would not constitute a transmission planning region for purposes of Order No. 1000. Additionally, Order No. 1000 stated that the scope of a

transmission planning region should be governed by the integrated nature of the regional power grid and the particular reliability and resource issues affecting individual regions. On compliance, the Commission has accepted a variety of transmission planning regions of different sizes and configurations, as well as varying numbers of public utility transmission providers.

Order No. 1000 also did not prescribe a particular definition of “benefits,” recognizing that regional flexibility to accommodate different approaches was appropriate rather than a one-size-fits-all approach. In response to this directive, public utility transmission providers in each transmission planning region, in consultation with stakeholders, developed and proposed regional cost allocation methods that would identify how benefits would be measured and how beneficiaries would be identified. The Commission has reviewed the proposed cost allocation methods for the individual regions, although several issues related to these proposals are pending on rehearing and further compliance.

**6. What metrics are you prepared to measure and report back to Congress that Order 1000 is going to lead to transmission projects being built more expeditiously would allow us to judge whether it has?**

Answer: The Commission stated in Order No. 1000 that recent increases in transmission development combined with projections by industry (including the North American Electric Reliability Corp. (NERC), the Commission-certified electric reliability organization) of the need for significant future additional transmission investments, as well as changes in the generation mix driven in part by public policy developments, required action to ensure that transmission planning and cost allocation requirements (first adopted in 2007 in Order No. 890) are adequate to support more efficient and cost-effective transmission facility decisions. The reforms adopted in Order No. 1000 were designed to work together to ensure that more transmission facilities would be considered on a comparable basis in the transmission planning process, increase the likelihood that regional transmission plans would reflect the more efficient or cost-effective transmission solutions to meet regional transmission needs, and improve the ability of those transmission projects to come to fruition. As it did following Order No. 890, the Commission will monitor transmission planning processes to ensure that they are effective in meeting regional transmission needs and supporting the provision of Commission-jurisdictional service at rates, terms and conditions that are just and reasonable and not unduly discriminatory or preferential.

**7. There is a growing level of convergence in the natural gas and electricity markets. Take New England for example, where I understand there may be a need for a new cost-sharing model to facilitate construction of new gas pipeline capacity, the absence of which is preventing New England consumers from realizing the full benefit of the nation's burgeoning natural gas supplies.**

**a. Please describe FERC's authority and ability to implement a cost-sharing model that would broaden the scope of responsibility for financing new pipeline capacity.**

Answer: At this time, the Commission is not contemplating changing its policy regarding cost recovery for new pipeline construction. Under the Commission's Certificate Policy Statement,<sup>1</sup> the threshold requirement for a finding that a pipeline expansion is required by the public convenience and necessity is that the expansion not be subsidized by existing customers who receive no benefit from the project. However, the pipeline and the expansion customers can agree on how the financial risks of the project might be shared among them. In addition, while the rates of existing shippers cannot be increased to support construction that will not benefit them, where a project combines an expansion with construction that will benefit existing customers, the pipeline can file to increase existing customers' rates to the extent it can demonstrate that the new facilities are needed to improve service to the existing customers.

**8. The proper design and operation of wholesale power markets are critical. Investment decisions in these markets are being made today based on existing market rules approved before the shale gas revolution, low load growth, proposed EPA rules, and the rise of intermittent renewables; in other words, under different conditions.**

**a. Please explain what FERC is doing and plans to do to review and improve market rules so that wholesale markets are sending the proper investment signals in light of structural changes impacting the power sector.**

Answer: There is an increasing pressure on competitive electric markets as we enter an investment cycle where market changes are stressing the system. I believe the Commission must ensure that the markets work fairly to give appropriate investment signals to base load, mid-merit, peaking and variable generation, as well as demand response and energy storage technologies. While some of the rules that govern power markets were written and instituted prior to the changes you reference, these rules are flexible, allowing market participants to plan for and act in the markets in a manner that best suits their needs. For instance, while load growth has slowed and our resource mix is changing, these factors are accounted for in long-run load forecasting. Likewise, in day-ahead and real-time markets, market rules allow for market participants to change their offers or reverse their positions if market changes make such a change economically efficient. Investment and day-to-day market decisions are shaped by market forces and implemented within market rules.

However, the Commission does periodically review market rules, *sua sponte*, and continues to do so. For example, one thing I am focused on is the Commission's review of the existing centralized capacity markets to ensure they function efficiently. We recently held a technical conference on these issues and sought written comments following the conference. The Commission is now reviewing the replies. Other areas of work for Commission staff in this area include a review of the current ancillary services products to assess whether they serve the intended purpose and whether system needs have changed to the degree that new or different ancillary service products are necessary.

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<sup>1</sup> 88 FERC ¶ 61,227(1999), order clarifying statement of policy, 90 FERC ¶ 61,128(2000), order further clarifying statement of policy, 92 FERC ¶ 61,094 (2000).



**9. Has FERC examined -- in a structured, systematic, transparent manner -- whether the experience with organized electricity markets has been a net benefit for consumers? Has anyone else? Does FERC plan to?**

Answer: Yes, FERC has examined the performance of each of the regional transmission organizations (RTOs) and independent system operators (ISOs) in a structured, systematic, transparent manner. On January 20, 2011, the RTOs and ISOs presented the results of a performance measurement exercise initiated by the Commission at an open Commission meeting. Each RTO and ISO enumerated the numerous economic, operational and reliability benefits attributable to the operation of their regional organized wholesale electric markets. (These presentations are available on the Commission's website, <http://www.ferc.gov/industries/electric/indus-act/rto.asp>, listed under "Conferences.") Associated with this public presentation and discussion, the ISO/RTO Council issued a 2009 State of the Markets Report, with follow up reports issued in 2010 and 2011. The Commission is in the process of updating these performance measurements.

In addition to these reports, additional evidence of the economic, operational and reliability benefits of regional organized wholesale markets to consumers can be inferred from the continued expansion of these markets. On December 19, 2013, Entergy joined the Midcontinent Independent System Operator (MISO) system. On March 1, 2014 the Southwest Power Pool (SPP) is expected to initiate its expanded market by providing a day-ahead energy and ancillary services market. Furthermore, on January 10, 2014, the Western Area Power Administration (WAPA) announced that it would begin negotiations with SPP to join the RTO. Also, effective January 3, 2013, the California Independent System Operator (CAISO) expanded to include a Nevada utility, Valley Electric Association, Inc. In February 2013 CAISO announced a memorandum of understanding with PacifiCorp to develop a regional real-time energy imbalance market (EIM).

**10. Baseload electric generating assets have a life span of 40 to 60 years or longer. The forward capacity markets in organized electricity markets typically operate three years ahead. Do you agree there's a fundamental mismatch between the investment recovery profile of electric generating assets and the way merchant markets are structured? Do you think FERC has a role to play in addressing this problem?**

Answer:  
I noted at the hearing that the Commission has opened an inquiry (Docket No. AD13-7-000) to consider how the current centralized capacity market rules and structures in the Eastern RTO/ISOs are supporting the procurement and retention of resources necessary to meet future reliability and operational needs. Whether the three-year "forward period" that you identify (which is used in two of the three Eastern RTO/ISOs) supports the overall goals and objectives of the forward capacity markets is one of many issues that are under discussion in that proceeding. The Commission held a technical conference in this docket on September 25, 2013, and is currently reviewing post-technical comments submitted by all interested entities to determine whether next steps may be appropriate with respect to the issue you raise, as well as many others.

It is important to note that the centralized forward capacity markets in PJM and ISO-NE are designed to secure the least cost combination of capacity resources needed to meet reliability requirements three years forward (the centralized capacity market in New York ISO operates on shorter timeframe, up to six months forward). Resources that clear in any centralized capacity market receive capacity payments in the specified delivery year along with revenues for selling energy and ancillary services. In this way, a combination of merchant spot and forward markets allow at-risk investors in electricity generating assets an opportunity to recover their costs by selling energy, ancillary services, and capacity on a competitive basis. Capacity revenues are important to all generation types, but they are generally not the largest source of revenue for baseload units that typically earn greater revenues from selling energy and ancillary services.

In addition, in a Staff Report issued in advance of the Commission's technical conference in Docket No. AD13-7-000, FERC staff discussed the tradeoffs inherent in choosing a longer or shorter forward period.<sup>2</sup> For example, Commission staff noted, among other things, that longer forward periods (like the three years currently utilized in PJM and ISO-NE) can increase competition by providing more lead time for new resources to be constructed and compete with existing generation. On the other hand, staff noted that a longer forward period can result in increased economic and resource adequacy risk for customers, since forecasts of needed capacity to meet resource adequacy requirements are generally more accurate closer to the delivery year. As we consider what next steps may be appropriate in our inquiry into centralized capacity markets in the Eastern RTO/ISOs, the Commission will need to balance investor and consumer risk, among other tradeoffs, to ensure that resource adequacy is maintained at just and reasonable rates.

**11. EIA, other data and trade group studies show greater levels of construction of generation capacity in non-RTO markets.**

- a. In a period of rapid change in the industry, is there any evidence that RTO markets, specifically the capacity markets, can best address these resource needs, while minimizing adverse impacts on the economy and consumers?**
- b. If not, what changes are most needed to RTO markets to achieve resource adequacy at least cost, in consideration of reliability, consumer impacts, fuel diversity and the environment?**

Answer: To date, the centralized capacity markets in PJM, New York and New England have been successful in meeting resource adequacy needs in those regions. These markets have also had success in attracting a wide range of new resources, including generation capacity, transmission infrastructure, demand response and investments in energy efficiency. For example, PJM recently reported to the Commission that since the inception of its capacity market, the Reliability Pricing Model (RPM), the region has attracted over 28,000 megawatts of new generation, 14,000 megawatts of demand

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<sup>2</sup> *Id.* at 11-13.

response, and 1,100 megawatts of energy efficiency.<sup>3</sup> In addition, PJM notes that RPM has played a role in promoting the retirement of uneconomic generation and preventing the retirement of economic generation. Over 47,000 megawatts of existing coal-fired generation in PJM has committed to be available in the 2016 base residual auction, reflecting a decision by the owners of those facilities to retrofit their units to meet environmental compliance requirements. Similarly, New York ISO reports that it has seen its capacity market attract over 10,000 megawatts of new generation, primarily in southeastern New York, and over 1,600 megawatts of new transmission, all into that same area.<sup>4</sup> New York ISO also reports that its capacity market has attracted approximately 1,500 megawatts of demand response, and allowed for significant retirements by uneconomic older generation.

As noted above, however, the Commission has opened an inquiry (Docket No. AD13-7-000) to consider how the current centralized capacity market rules and structures in the Eastern RTO/ISOs are supporting the procurement and retention of resources necessary to meet future reliability and operational needs. The questions you raise are central to that inquiry. For example, the Commission heard testimony at its September 25, 2013 technical conference in that docket on the impacts of changing market conditions - including low natural gas prices, state and federal policies encouraging the entry of renewable resources and other specific technologies, and the retirement of aging generation resources - on the RTO/ISO centralized capacity markets. In addition, the Commissioners and a panel of industry experts discussed possible future directions for the capacity markets in light of these dynamic changes. Following that conference, the Commission issued a request for further written comments, which included questions on these issues. The Commission is now reviewing those comments and considering next steps, including whether changes are needed in light of the rapid changes taking place in the electricity industry.

**12. Between 2008 and 2012, the clearing prices in the PJM wholesale energy market during times of high energy demand declined significantly because of the drop in natural gas prices. For example, the clearing price for 150GW in PJM was about \$92 in 2008 and \$40 dollars in 2012. Similarly, the clearing price for 175GW in PJM was \$155 in 2008 and \$63 in 2012.**

**a. Has FERC calculated how much these drops in prices saved consumers during this time period?**

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<sup>3</sup> “Statement of Andrew Ott, Executive Vice President – Markets, PJM Interconnection, L.L.C.”, prepared for Technical Conference in Docket No. AD13-7-000 (September 25, 2013), available at <http://www.ferc.gov/CalendarFiles/20130911144119-Ott%20Comments.pdf>.

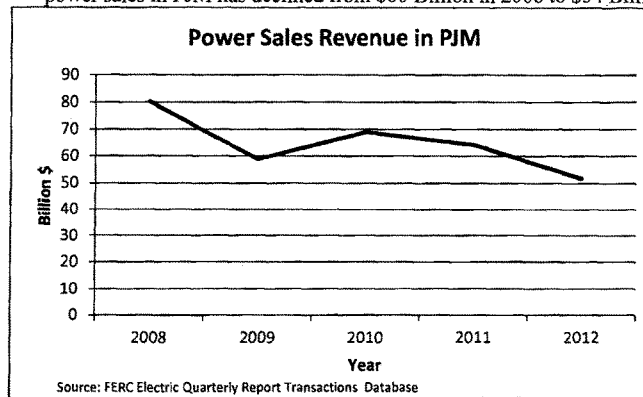
<sup>4</sup> Rana Mukerji, Senior Vice President – Market Structures, New York Independent System Operator, Inc., “Centralized Capacity Markets in RTO/ISOs: The NYISO Perspective”, presented at Technical Conference in Docket No. AD13-7-000 (September 25, 2013), available at <http://www.ferc.gov/CalendarFiles/20130913141158-Mukerji,%20NY-ISO.pdf>.

Answer: FERC jurisdiction is over wholesale prices and does not include retail rates to end-use consumers. Retail rates are approved by state regulators and methods for setting rates vary widely among states and for individual utilities within each state. Prices to consumers eventually reflect long term trends in wholesale prices, but the speed and magnitude varies.

It is also noteworthy that EIA tracks retail prices paid by consumers. It reports that the average retail electricity price to residential customers in the Middle Atlantic states increased from 14.88 cents/kWh in 2008 to 15.27 cents/kWh in 2012. However, the price to industrial customers decreased from 8.2 cents/kWh to 7.49 cents/kWh over the same period. State utility commissions may approve a lagged collection by utilities in retail rates of earlier-year procurement costs that have not yet been included in rates. Retail prices encompass both the cost to produce or buy energy for customers as well as the cost to maintain the local distribution system.

**b. Looking at the other side of the equation -- with these price differentials, the revenues collected by generators in PJM declined significantly. Has FERC calculated or estimated how much the revenues collected by generators in the PJM energy market decreased over the past three or four years?**

Answer: Generator revenue is not likely to directly follow short term market prices, but is affected by longer term price trends and market expectations. Merchant generators and utilities with excess generation typically hedge their forecasted production through long term contracts to mitigate earnings volatility. Generators that are less hedged or that use shorter term contracts to hedge are more exposed to wholesale price movements. While FERC does not track the specific hedging strategies of each generator, it does collect information on all jurisdictional power sales. Commission Staff has observed that the total revenue reported for power sales in PJM has declined from \$80 Billion in 2008 to \$54 Billion in 2012.



**c. Does the current structure in PJM bias towards existing generators?**

Answer: The existing PJM mechanism was approved by the Commission as just and reasonable and not unduly discriminatory or preferential. Any entity that has evidence that

an existing PJM tariff provision creates an undue bias or preference in favor of existing generators or any other market participant may submit the evidence to the Commission in the form of a section 206 complaint for consideration.  
 FERC staff observes that 5% of the cleared capacity in the 2015/2016 capacity auction was from new generation resources or additions.

<b>PJM Cleared Capacity vs. Incremental New Capacity by Delivery Year</b>						
<b>All Figures are in MW</b>						
<b>Delivery Year</b>	<b>Cleared Capacity</b>	<b>Increased Generation</b>	<b>Decrease in Generation</b>	<b>Net New Generation</b>	<b>Demand Response</b>	<b>Energy Efficiency</b>
2011/12	132,221.5	3,576.3	264.7	3,311.6	661.7	-
2012/13	136,143.5	1,893.5	3,253.9	(1,360.4)	7,938.1	632.3
2013/14	152,743.3	1,737.5	1,924.1	(186.6)	2,993.3	101.1
2014/15	149,974.7	1,582.8	1,550.1	32.7	2,514.4	73.1
2015/16	164,561.2	8,207.0	6,432.6	1,774.4	4,200.5	101.3

Source: PJM, "2015/2016 RPM Base Residual Auction Results," Table 7, page 19

**13. Under former Chairman Wellinghoff, it seems that FERC's policies promoted certain generation sources -- renewables, distributed generation, demand response -- to a degree that threatens all baseload generation.**

**a. Should demand response, for example, be rewarded in the same way as steel in the ground?**

Answer: In energy markets, resources are compensated based on having the same capabilities. In Order No. 745, the Commission stated:

that when a demand response resource participating in an organized wholesale energy market administered by an RTO or ISO has the capability to balance supply and demand as an alternative to a generation resource and when dispatch of that demand response resource is cost-effective as determined by the net benefits test described herein, that demand response resource must be compensated for the service it provides to the energy market at the market price for energy, referred to as the locational marginal price (LMP).<sup>5</sup>

**b. Is the reliability of demand response and renewables as good as fossil fuel or nuclear capacity, which is almost always available? If not, doesn't that threaten the reliability of the grid?**

Answer: Demand response, renewables, fossil fuel and nuclear capacity all have different characteristics, and the Commission works to ensure that resources are compensated based on the services they actually provide. In operations, each system operator takes the different resource characteristics into account when scheduling and dispatching sufficient resources, including an adequate reserve margin, to meet the system's daily and hourly needs. To ensure reliability in

<sup>5</sup> Order No. 745 P 2 (2011)

the face of a changing resource mix, the Commission is considering the flexibility of the grid, for example by examining ancillary service offerings and requirements.

**14. Are centrally-dispatched markets, such as those operated by Regional Transmission Operators (RTOs), the optimal means to integrate variable energy resources at least cost? Why or why not?**

Answer: Centrally dispatched markets have demonstrated their effectiveness in integrating variable energy resources (VERs). The Commission also has undertaken initiatives that will improve integration of VERs both within and outside organized electric markets. In addition to Order No. 1000, which is discussed above, several such initiatives include:

- Order No. 764 (Integration of VERs) – In this Order the Commission adopted two reforms, applicable to transmission providers both within and outside of RTOs and independent system operators (ISOs), which allow VERs to appropriately manage exposure to energy imbalance penalties. These reforms are also intended to eventually allow transmission providers to carry fewer reserves, and thus reduce reserve costs. First, Order No. 764 requires transmission providers to offer customers the option of scheduling transmission service at 15-minute intervals rather than hourly. This reform allows system operators the flexibility to manage their systems effectively and efficiently, while helping transmission customers avoid excessive imbalance penalties by updating their transmission schedules closer to real time. Second, the Order requires new VERs to provide transmission providers with certain data to support the development and deployment of power production forecasting by transmission providers.
- Order No. 784 (Third-Party Provision of Ancillary Services; Accounting and Financial Reporting for New Electric Storage Technologies) – This order enhanced competition and transparency in ancillary services markets by making it easier for independent providers to sell imbalance energy and reserves. This is expected to decrease ancillary service costs to all generators, including VERs.
- Order No. 792 (Small Generator Interconnection Agreements and Procedures) – In this Order, the Commission amended its *pro forma* small generator interconnection agreements and procedures to ensure interconnection time and costs for all resources, including VERs, remain just and reasonable while continuing to ensure safety and reliability. For example, one of the reforms adopted in this Order provided small generators (up to 20 megawatts), with the option of requesting a pre-application report providing existing information about system conditions at possible points of interconnection, which is expected to help generators make more informed siting decisions.

**15. Within regions with security-constrained economic dispatch, how is this dispatch affected by negative or zero-priced offers received from renewable energy resources?**

Answer: In RTO-administered markets, security-constrained economic dispatch finds the lowest cost of dispatching resources, based on their bids, to serve load while respecting transmission

system limitations. In RTOs' competitive markets, a resource's bids are disciplined by competition and reflect the resource's incremental cost of energy production. A zero dollar bid by an intermittent resource is consistent with competitive bidding - it is consistent with the incremental cost of energy from the resource and usually reflects a resource's contractual obligation to produce its full output regardless of what the market clearing price is. A negative bid usually indicates that a resource is willing to reduce its scheduled output if it is paid its opportunity cost to do so. An overview of how the RTO day-ahead and real-time markets operate generally will be helpful to understanding the zero or negative bidding issue. First, all RTO administered energy markets apply the same bidding rules to all resources. Thus, intermittent generators, such as wind, have the same bidding requirements as all other resources and are dispatched based on rules that apply equally to all resources. All resources are allowed to bid in day-ahead and real-time energy markets.

Second, all resources have the option to self-schedule. A self-schedule is accomplished by submitting a bid that places the resource at the bottom of the bid stack. In most RTOs that is a bid of zero or the lowest offer permitted by the market rules. In some markets, it can also be accomplished by submitting an energy quantity without a price. In this way, the resource assures that it will be scheduled day-ahead and dispatched in real-time consistent with security constraints. Typically resources self-schedule some or all of their output because they have entered into contracts that require them to deliver certain amount of energy.

Third, all resources dispatched at the same time and location receive a uniform market-clearing price that typically exceeds their bid. Thus, a bid of zero or self-scheduling by some resources does not necessarily mean a market-clearing price of zero. However, there are occasions when market clearing prices may be negative, for example, during a low load, off-peak hour when minimum generation levels are greater than load.

Fourth, any resource may submit a bid in the real-time market to signal its willingness to increase or reduce its day-ahead schedule. A negative bid to decrease output in the real-time market indicates the willingness of the generator to reduce its output if it is paid its bid price. For an intermittent resource, the negative bid may reflect, for example, the forgone value of renewable energy credits that would otherwise accrue to the resource owner or to the load serving entity that has contracted with the resource if the resource produced energy. It may also reflect contractual penalties for not delivering full output. Negative bids to decrease output allow intermittent resources to signal their willingness to respond to system conditions and provide a valuable market-based tool for RTOs to deal with oversupply conditions and efficiently balance supply and load.

A dispatch that assures customers will be served at least cost consistent with security constraints is achieved when all suppliers offer their resources on competitive terms. An offer to self-supply, such as a zero bid, indicates that the resource is willing to accept the competitive market-clearing price to provide energy. Thus, market rules that allow for self-scheduling by permitting a zero or negative bid support a competitive market outcome that provides electricity to customers at the least cost and allows RTOs to reliably manage their systems.

**16. A recent report commissioned by FERC as part of the National Action Plan on Demand Response noted that "Demand Response is often cited as a means of improving the reliability of the electricity system, yet there is little empirical data to demonstrate this benefit."**

**a. What specific actions is FERC taking to ensure that DR is in fact supporting, rather than potentially impairing, the reliability of the electric system, particularly in regions where DR is increasingly being relied upon as a capacity resource?**

Answer: In February 2013, the Commission directed public utilities to incorporate by reference updated business practice standards adopted by the Wholesale Electric Quadrant of the North American Energy Standards Board to support the measurement and verification of demand response and energy efficiency products in wholesale markets.<sup>6</sup> In addition, I note that Commission staff regularly monitors and reviews reports provided by the organized wholesale markets that address the performance of demand response resources when called upon to maintain reliability.

**17. Increasing evidence suggests that some Demand Response providers are being paid a high price to deliver demand response at a future date, but these providers then turn around and buy the product from someone else in the meantime. In many cases they never intended to deliver the service themselves in the first place, but they are able to profit from markets that, at times value DR even more than actual power plants.**

**a. Does FERC support the actions being taken by certain RTOs/ISOs to ensure that DR is a physical product that can actually be delivered to ensure resource adequacy?**

Answer: This issue is pending before the Commission in a contested proceeding. Because these issues remain pending before the Commission in a contested proceeding, I cannot comment on their merits.

**b. Is there any justification for treating DR providers differently from other capacity resources, such as generation, given that DR is in fact a newer and less understood resource with no track record to rely on?**

Answer: The Commission is committed to ensuring that market rules treat all capacity resources fairly, based on their actual performance.

**18. Since the enactment of PURPA in 1979, FERC has never exercised its authority under Section 210 to pursue enforcement actions against a state commission in federal court, as it has chosen to do with the Idaho PUC. States clearly have authority to set the avoided cost for the purchasing utility and set terms and conditions for Qualifying Facilities (QF) that pass muster with FERC. Recently FERC has been accepting many more petitions for**

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<sup>6</sup> Order No. 676-G (2013).



**enforcement, and taking a more aggressive stance toward the state PUC role in determining the terms and conditions of these QF contracts.**

**a. Why is FERC doing this, and what has changed in either the renewable/QF space, or with the federal-state relationship where FERC feels compelled to do this?**

Answer: As noted in your question, FERC pursued an enforcement action under PURPA against the Idaho PUC with respect to a single issue that arose in at least three cases during a short timeframe. I am pleased to report that FERC and the Idaho PUC reached a settlement of that matter last month. I look forward to working with state commissions in a collaborative manner with respect to PURPA and other issues.

**19. Earlier this year, Congress unanimously passed the Hydropower Regulatory Efficiency Act. Among other changes, the Act revised how FERC regulates small conduit hydro projects, and required the Commission to investigate a 2-year licensing process for non-powered dams and closed loop pumped storage projects and also conduct pilot projects.**

**a. Please provide an update on the Commission's activities to date to implement these and the other provisions of the law and outline what additional steps the Commission will take in 2014.**

Answer: The Commission began implementation immediately after enactment. In order to assist developers to take advantage of the opportunities offered by the Act, the Commission updated its website to provide guidance on how to apply for conduit and 10-megawatt small hydropower exemptions, qualifying conduits, and preliminary permit term extensions under certain of the Act's provisions.

Pursuant to section 6 of the Act, the Commission conducted a workshop on October 22, 2013, to solicit input on the feasibility of a two-year licensing process for projects that are located at existing, non-powered dams or are closed-loop pumped storage projects. (Because of the government shutdown, the meeting was held on October 22 rather than by October 8 as required in the legislation.) In addition to testimony received at the meeting, 16 comment letters were filed after the workshop by potential developers, licensees, federal and state resource agencies, trade groups, and other interested parties.

Based on the workshop testimony and written comments, Commission staff developed criteria and a potential schedule for a two-year licensing process and issued a Notice on January 6, 2014, soliciting prospective license applicants to file requests to test the process. The window for filing a request to test the process begins on February 5, 2014, which, under the Act, is the date that the Commission is required to implement pilot project testing; the filing window ends on May 5, 2014. Commission staff will assess the suitability of any proposals to test the process, and if a proposal is deemed suitable, will authorize the prospective applicant to commence process testing.

At our January 16, 2014 Open Meeting, Commission staff provided the Commission with an overview of the Hydropower Regulatory Efficiency Act of 2013 and reported on some of the actions the Commission has taken so far in compliance with the Act. Staff's presentation is

available on the Commission's website at <http://www.ferc.gov/legal/staff-reports/2014/01-16-14-efficiency-act-2013.pdf>.

**b. What feedback did the Commission receive from the October workshop on the 2-year licensing process? Do you believe that FERC will be able to implement pilot projects in 2014? If not, why not?**

Answer: Most of the commenters stated that a two-year licensing process is feasible and offered suggestions for ensuring a high likelihood of success, including that license applicants have a substantive proposal at the onset of the process and that federal and state resource agencies engage in the process. Other commenters stated that a two-year process is feasible provided that the proposed project meets certain criteria, including that the project have minimal environmental effects, minimal controversy at the onset of the two-year process, minimal need for environmental studies prior to licensing, and a small footprint.

The Commission has neither statutory nor budgetary authority to implement pilot projects itself; therefore, pilot projects can be implemented in 2014 only if the Commission receives proposals from potential applicants wishing to test the two-year licensing process. As noted above, the window for filing proposals to test the process begins on February 5, 2014, and ends on May 5, 2014. If the Commission receives a proposal to test the process that meets the requirements stipulated in the Commission's January 6, 2014 Notice, Commission authorization to begin testing could be granted as early as the Spring or Summer of 2014.

**c. Did the workshop and comment period reveal any additional licensing issues (either at FERC or any other agency) that Congress would need to address through legislation to better effectuate the intent of the 2-year process? If so, please outline the issues.**

Answer: No, however, there was discussion on whether agency mandatory conditioning authority under the Federal Power Act or other federal laws would hinder the feasibility of a two-year process. Commenters stated that an effective remedy would be for federal and state resource agencies with mandatory conditioning authority to be engaged throughout the process, and for license applicants to prepare thorough and complete license applications and proposed projects that are low impact.

**d. How is the process for excluding small conduit hydro projects from FERC licensing working? Please provide numbers on determinations sought as well as those granted and or denied, and statistics on the length of time these proceedings have taken.**

Answer: The process is working well. Staff prepared guidance on the procedures required in the Act, including a template for the Notice of Intent. This guidance is on the Commission's website, as is a table showing the status of the Notice of Intent requests. To date, 18 Notices of Intent to Construct Qualifying Conduit Facilities have been filed: 16 have been approved, 1 was rejected because it did not meet the qualifying criteria, and 1 is pending. To date, the average

processing time from the filing of the Notice of Intent to the Commission's Final Determination is 63 days.

**20. Have any of you or any other Commissioner had contact with the White House regarding the President's Climate Action Plan? If so, please describe the nature of the contact.**

**a. Have any of the activities undertaken by FERC been identified by the Administration as climate-related activities? If so, please identify.**

Answer: At the time of the hearing, I had not had any contact with the White House regarding the President's Climate Action Plan. While I have still have not had specific conversations concerning the Climate Action Plan, I have had two discussions with White House staff since the hearing to discuss the need for FERC to remain engaged as environmental regulations are issued to help maintain reliability and ensure that markets adapt and to discuss the appropriate participation by FERC in the President's Quadrennial Energy Review.

**21. Were you surprised to see that DOE's most recent Order granting authorization to export LNG partially denied Freeport LNG's request solely on the basis of the volume referred to in their FERC application?**

Answer: DOE did not, nor does it need to, consult with us prior to making any of its decisions on the export of LNG as a commodity.

**a. Freeport LNG cited the "nameplate" volume capacity in their FERC application. What steps would they be required to take with FERC if they find they are capable of exceeding that? Can they amend their application?**

Answer: Yes, Freeport would have to file to amend its application to request authorization to operate its proposed facilities at a higher capacity than the level currently requested.

**b. What precedent has DOE set by denying a request based on a FERC application? Do you believe DOE's basis was appropriate?**

Answer: DOE's process is their own and we have no basis for commenting on DOE's actions. With respect to LNG, the Commission performs an environmental and safety analysis of a proposed LNG project and does not authorize the import or export of LNG as a commodity.

**22. Other than for environmental reasons, do you believe that FERC has the authority to deny an application for an LNG export facility?**

Answer: The Commission's role with regard to LNG is to determine whether the facilities being proposed can be constructed and operated safely and whether they are consistent with the public

interest. Consequently, the Commission could deny an application based on safety considerations.

**23. The license for the Catawba- Wateree Hydroelectric facility located in North and South Carolina expired on August 31, 2008. In 2006, well before the license expired, the project owner and operator timely submitted a relicensing application to FERC, along with a Comprehensive Relicensing Agreement (CRA) that was negotiated with more than 70 public and private stakeholders from North and South Carolina. On July 8, 2013, the National Marine Fisheries Service issued a final Biological Opinion for the project as part of the Section 7 consultation process under the Endangered Species Act. All the federal requirements seem to have been cleared, allowing FERC to now proceed to make a final determination on the relicensing application and issue the new license.**

**a. What is the status of the Catawba-Wateree relicense application?**

Answer: The state of South Carolina denied Duke Energy Carolina, LLC's (Duke Energy) request for Section 401 of the Clean Water Act water quality certification for its project on August 6, 2009. Duke Energy is currently appealing the denial to the South Carolina Supreme Court. The Commission is unable to issue a new license for the project until the state of South Carolina grants or waives certification.

**b. What is the Commission's sense of when a final determination of the application will be made so that the surrounding region can finally, after five years of waiting, start to see the economic, public and environmental benefits that will flow from the CRA being implemented as part of the new license?**

Answer: A final determination on the application will be made following a grant by South Carolina of water quality certification for the project, or a waiver of certification. The timing of action on the water quality certification is controlled by the state of South Carolina.

**24. In May 2013, Big Rivers Electric Corporation ("Big Rivers") submitted to the Midcontinent Independent System Operator, Inc. ("MISO") an Attachment Y notification for Big Rivers' Coleman Generation Station ("Coleman"). In that notification, Big Rivers announced that it would suspend operation of Coleman from September 1, 2013 through December 31, 2015. MISO has determined that continued operation of Coleman is necessary for reliable delivery of the full amount of power to the Century aluminum smelter that is adjacent to Coleman. Consequently, MISO has entered into a System Support Resource ("SSR") Agreement with Big Rivers to enable Coleman's continued operation. The SSR Agreement was filed with the Commission on November 1, 2013, in Docket No. ER14-232-000. The SSR Agreement anticipates monthly costs in excess of \$3 million, nearly all of which will be borne by Century. This SSR filing comes on the heels of several other SSR filings by MISO. The costs of these other SSR filings are also being borne by customers in the Midwest.**

**a. Have MISO and the Commission adequately explored all feasible alternatives to the Big Rivers SSR agreement and other such agreements to reduce or eliminate the need to impose SSR costs on Century or other Midwest consumers?**

Answer: Under its Commission-approved Tariff, MISO is required to explore all feasible alternatives before entering into an SSR agreement.<sup>7</sup>

With regard to the SSR agreement and rate schedule for Coleman Units 1-3 owned by Big Rivers Electric Cooperative that are at issue in Docket Nos. ER14-292-000 and ER14-294-000, the Commission issued an order on December 30, 2013 accepting and suspending the SSR agreement and rate schedule, subject to refund and further Commission order.<sup>8</sup> Because these issues remain pending before the Commission in a contested proceeding, I cannot comment on their merits.

With regard to the SSR agreement and rate schedule for the Edwards Unit 1 owned by Ameren Energy Marketing that are at issue in Docket Nos. ER13-1962-000 and ER13-1963-000, the Commission issued an order on November 25, 2013 accepting and suspending the SSR agreement and rate schedule, subject to refund and further Commission order.<sup>9</sup> As such, for the same reasons given above, I cannot comment on the merits of these issues.

The Commission has accepted other SSR agreements and rate schedules, and in doing so, has determined that MISO adequately explored all feasible alternatives to those SSR agreements consistent with its Tariff.

**b. Please identify the actions that the Commission has undertaken to explore the following as feasible alternatives to Big Rivers' SSR and other SSRs:**

- i. Live-line transmission maintenance;
- ii. Planning, design, and construction of new transmission facilities; and
- iii. Special Protection Schemes

Answer: As stated above, the SSR agreements and rates schedules for the Coleman Units 1-3 and the Edwards Unit 1 are pending before the Commission in contested proceedings and the Commission cannot comment on their merits.

Regarding other SSRs agreements and rate schedules that have been accepted by the Commission, as noted above, in accepting these SSR agreements and rate schedules, the Commission determined that MISO adequately explored all feasible alternatives to these SSR agreements consistent with its Tariff.

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<sup>7</sup> MISO, FERC Electric Tariff, 38.2.7b, System Support Resources, 4.0.0.

<sup>8</sup> *Midcontinent Indep. Sys. Operator, Inc.*, 145 FERC ¶ 61,296, at P 15 (2013).

<sup>9</sup> *Midcontinent Indep. Sys. Operator, Inc.*, 145 FERC ¶ 61,163, at P 16 (2013).

**The Honorable Fred Upton**

**1. We often have FERC staff testify before this Committee rather than a FERC Chairman or Commissioner. FERC staff usually explains that they are testifying on their own behalf, and expressing their own views and "not those of the Commission or of any individual Commissioner." This can be problematic. We need to be able to rely on FERC staff's testimony as reflective of the agency's collective views so that we are informed of FERC's position on certain policies and legislation.**

**a. Will you commit to helping us resolve this disconnect for future hearings featuring FERC staff?**

Answer: Because the Commission is a five-member body that speaks officially through its decisions, a staff member cannot commit the Commission to positions on specific matters or policies in areas in which it has yet to issue decisions, i.e., future Commission action. A staff member can, however, speak authoritatively to positions that the Commission has taken up through the present. The disclaimer that staff members give during testimony should not be read to mean that they cannot speak to existing Commission policies in a manner on which the Congress can rely. These limitations are in line with 5 CFR 2635.807(b)(2) (in the context of outside writings, requiring a prominent disclaimer stating that the views expressed do not necessarily represent those of the agency or the US Government).

**2. At a hearing last month on H.R. 3301, the North American Energy Infrastructure Act, Jeff Wright from FERC testified about certain concerns with the legislation which involved confusion over whether the legislation would prohibit FERC from fully complying with Section 3 and Section 7 of the Natural Gas Act.**

**a. If we were to amend the legislation to specifically state that nothing in HR 3301 would affect the need to fully comply with the Natural Gas Act, do you believe that FERC would no longer have concerns with the legislation?**

Answer: Yes, the suggested change would address the concerns.

**3. A key goal in FERC's Strategic Plan, 2009-2014, calls for safe, reliable, and efficient infrastructure development to integrate new resources.**

**a. Are you supportive of FERC's goal for infrastructure development included in the plan?**

Answer: I strongly support FERC's commitment to development of safe, reliable, and efficient infrastructure that will meet the Nation's energy needs. I also recognize the importance of the Commission's responsibilities with respect to certification of natural gas pipeline infrastructure and LNG terminals, as well as licensing of hydropower projects. FERC's policies, including Order No. 1000, transmission incentives, and generator interconnection also support the development of electric transmission infrastructure. In addition, the Commission works to ensure that the competitive markets work fairly to give appropriate investment signals to base

load, mid-merit, peaking and variable generation, as well as demand response and energy storage technologies. Finally, the Commission ensures just and reasonable rates for the transportation of oil and oil products.

**b. What enhancements or changes would you consider to this goal?**

**c. What other changes to FERC's Strategic Plan do you think may be needed?**

Answer: I am always open to looking for ways to improve the Commission's processes. I expect that the Commission's strategic plan for FY2014 – FY2018 will be issued early this year. Following that issuance, I would be happy to provide a briefing on the new Strategic Plan.

**4. Since states have their own transmission planning processes, why does FERC believe it's necessary to layer on a new federal process? Shouldn't planning for new transmission be overseen by the body that has the authority to approve or disapprove the resulting plans? Isn't that body the state- rather than FERC?**

Answer: As an initial matter, concerns about the relationship between Order No. 1000 regional transmission planning process and individual states' integrated resource planning processes have been raised on rehearing before the Commission in some of the Order No. 1000 compliance proceedings. For this reason, I cannot speak to the specifics of those pending cases.

More generally, the Commission has an obligation under the Federal Power Act to ensure that Commission-jurisdictional rates are just and reasonable and not unduly discriminatory or preferential. Order No. 1000 explained that its transmission planning and cost allocation reforms will help ensure that the rates, terms, and conditions of Commission-jurisdictional services satisfy this statutory standard. Moreover, Commission requirements for transmission planning are not a creation of Order No. 1000; rather, the transmission planning requirements of Order No. 1000 build on Order No. 890, which the Commission adopted in 2007.

It is important to note, however, that the Commission stated clearly that the reforms adopted in Order No. 1000 do not infringe on siting and integrated resource planning decisions that are frequently made at the state level. In addition, the Commission emphasized the benefits of states playing an important role in Order No. 1000 regional transmission planning processes, if they so choose. The Commission also did not assert authority to approve or disapprove the transmission plans that result from the Order No. 1000 regional transmission planning processes.

**5. Federal statute divides the jurisdiction of FERC and CFTC between cash markets and derivatives markets, respectively. Section 720 of the Dodd-Frank Wall Street Reform and Consumer Protection Act required CFTC and FERC to negotiate a memorandum of understanding by January 2011 that would integrate energy market oversight and improve information sharing between the two commissions. As of this letter, FERC and CFTC had failed to negotiate such a memorandum because, according to a letter sent to Congress this August by then-FERC Chairman Jon Wellinghoff, "the two agencies disagree over whether**

**the CFTC should provide FERC with certain data that we believe is critical to our surveillance program to detect and deter energy market manipulation."**

**a. I understand that to complete its investigations, FERC often must request trading data from CFTC. Is it true that CFTC often takes more than two months to supply that requested data?**

Answer: Before responding to your specific questions, it is important to note that on January 2, 2014, FERC and the CFTC signed a memorandum of understanding (MOU) with respect to information sharing, as required by Dodd-Frank. Under the 2005 MOU, it was not uncommon for the process under which FERC received information from the CFTC to take more than two months. The new MOU is intended to result in broader information sharing than currently occurs and is, therefore, a first step toward sharing appropriate data in a timely manner. Of particular importance, the new MOU recognizes that data can be shared for market surveillance purposes. It will be essential for the agencies to work together and to make an institutional commitment to, as well as the resources necessary for, the day-to-day, nuts-and-bolts implementation of the concepts established in this MOU.

**b. I understand that CFTC and FERC technical staff have discussed giving FERC investigators the ability to download this data electronically and instantaneously. Is FERC aware of any technical reason why this information sharing is not yet occurring?**

Answer: In contrast to the process under the 2005 MOU, a live data feed of relevant trading information would be far more efficient and effective. As the agencies implement the newly signed MOU, FERC is committed to resolving any technical concerns that the CFTC may have with respect to establishing a secure data feed for this information.

**c. A letter from then-Chairman Wellinghoff suggests that information sharing is vital to its investigations. When was the last time any of you met with a commissioner of the CFTC to express in person the importance of information sharing?**

Answer: During December 2013, I spoke twice with then-CFTC Chairman Gensler to discuss the importance of information sharing. These discussions led to the signing of the above-noted MOU on January 2, 2014. Since Chairman Gensler's departure from the CFTC, I also have spoken with CFTC Acting Chairman Wetjen about the need for prompt and effective implementation of that MOU.

**6. When it comes to trading in natural gas and electricity markets, and without simply reciting statutory language, what is your understanding of how FERC defines market manipulation?**



Answer: FERC's EPCA 2005 anti-market manipulation authority is based on section 10(b) of the Securities Exchange Act of 1934. After receiving its statutory authority, FERC went through a rulemaking to implement its statutory authority. FERC received extensive comments during the rulemaking process and responded to the comments in the Final Rule, Order No. 670. This Order carefully explains that "[t]he Commission will act in cases where an entity: (1) uses a fraudulent device, scheme or artifice, or makes a material misrepresentation or a material omission as to which there is a duty to speak under a Commission-filed tariff, Commission order, rule or regulation, or engages in any act, practice, or course of business that operates or would operate as a fraud or deceit upon any entity; (2) with the requisite scienter; (3) in connection with the purchase or sale of natural gas or electric energy or transportation of natural gas or transmission of electric energy subject to the jurisdiction of the Commission." FERC often looks to SEC precedent for guidance on what constitutes manipulation on a case-by-case basis as appropriate under the specific facts, circumstances, and situations in the energy industry. An essential element of our rule, as noted, is scienter—which refers to the state of mind of the individual or company engaging in the conduct. To establish a violation of the rule, the Commission must show that the subject of a market manipulation investigation engaged in the conduct at issue with actual intent or recklessness.

**7. Is it your understanding that FERC must prove "fraud" under the Natural Gas Act and Federal Power Act to make a finding of market manipulation?**

Answer: In Order No. 670, the Commission noted that unlike common law fraud a violation of the anti-manipulation authority does not require proof of reliance, causation, or damages. Under Order No. 670, however, FERC must still prove scienter, as well as either a fraudulent device, scheme or artifice, a material misrepresentation, a material omission where there was a duty to speak, or a course of business that would operate as a fraud or deceit upon any entity.

**8. What is your understanding of what constitutes "impairing a well-functioning market" as FERC has used that term in Order No. 670?**

Answer: FERC, in Order No. 670 and subsequent orders in enforcement matters, has stated that for purposes of the anti-manipulation rule, "the Commission defines fraud generally, that is, to include any action, transaction, or conspiracy for the purpose of impairing, obstructing, or defeating a well-functioning market." The type of conduct that may impair a well-functioning market necessarily varies from case to case, but, among other things, includes any fraudulent or deceptive conduct designed to interfere with how prices are established or how markets are supposed to operate when market participants are playing by the rules. Such fraudulent or deceptive conduct can be contrasted with trading in accordance with market fundamentals where there is no scienter. In Order No. 670, the Commission also noted that "if a market participant undertakes an action or

transaction that is explicitly contemplated in Commission-approved rules and regulations, we will presume that the market participant is not in violation of the Final Rule.”

**9. Do you think market participants have fair notice of how FERC defines market manipulation? Do you think market participants have fair notice of how FERC defines "impairing a well-functioning" market?**

Answer: Yes, I do think that market participants have fair notice of how FERC defines market manipulation and impairing a well-functioning market. In the Commission’s orders implementing its anti-manipulation authority—from Order No. 670 to orders approving settlements, Orders to Show Cause, orders following litigated matters before FERC Administrative Law Judges, and, more recently, Orders Assessing Civil Penalties (in Federal Power Act cases), which have covered a wide range of manipulative conduct, the Commission has striven to set out with as much particularity as possible the prohibited conduct at issue. In addition, as noted in Order No. 670, SEC precedent under Rule 10b-5 may provide useful guidance. That being said, we are early in our work on manipulation cases and I believe the Commission should continue to assess whether additional guidance may be helpful going forward.

**10. FERC has been criticized recently by energy expert Professor William Hogan from Harvard University for not giving market participants adequate notice of what constitutes market manipulation. Do you agree with Professor Hogan's conclusion that this lack of clarity is going to imperil the natural gas and electric markets?**

Answer: For the reasons stated above, I believe that FERC has given market participants adequate notice of prohibited conduct through regulations, settlements, and orders to show cause. I note that the Commission is early in its work on manipulation cases and I believe it should continue to assess whether additional guidance may be helpful going forward.

**11. The Commonwealth of Puerto Rico is shifting its reliance on oil to natural gas as its primary source of electricity generation, reducing its cost of electricity to 22 cents per kilowatt hour by 2015. The Aguirre Offshore GasPort Project (AOGP) is a key element to this strategy. As the Commonwealth initiates the authorization process, what efforts has FERC been engaged in with the Puerto Rico Electric Power Authority (PREPA) and other agencies within Puerto Rico and what challenges are the agencies likely to encounter in completing this project?**

Answer: The Aguirre Offshore GasPort Project is being developed by Excelerate Energy, LP in cooperation with the PREPA. Because PREPA is considered a co-sponsor of the proposed project, it is precluded from being a cooperating agency working directly with FERC staff on the Commission’s environmental analysis of the project. However, FERC staff has been engaged

with numerous other Puerto Rico (PR) Commonwealth agencies; in particular, the PR Planning Board, PR Permits Management Office, PR Environmental Quality Board, PR Department of Natural and Environmental Resources, and PR Department of Health are participating as cooperating agencies in the preparation of the FERC's Environmental Impact Statement. FERC staff and PR agency staff have maintained communication on project-related issues through regularly scheduled conference calls and issue-specific conference calls. In addition, FERC staff has met with various resource agencies on several occasions in PR, the most recent being a November 6, 2013 interagency meeting in San Juan. One of the main topics at this meeting was how to best integrate the various PR permitting requirements into the FERC environmental review process.

#### **The Honorable Ralph Hall**

**1. In most instances, FERC has been appropriately respectful of the limits of its jurisdiction when it comes to non-jurisdictional entities such as electric cooperatives and others. However, there have been occasions where FERC has crossed that line, at least in the eye of some observers, or has come so close that the jurisdictional limits are for all practical purposes nullified. One example would be some of the orders issued earlier this year on the regional Order 1000 compliance filings. In some of those orders, such as the WestConnect order issued in March, FERC made certain rulings regarding cost allocation for transmission projects that overrode or dismissed the concerns raised by the non-jurisdictional entities about whether they can participate in regional planning without being subject to binding cost allocation. Going forward, how will FERC improve its treatment of non-jurisdictional entities while still pursuing its efforts to overhaul transmission planning?**

Answer: In Order No. 1000, the Commission recognized that many of the existing regional transmission planning processes are comprised of both public and non-public utility transmission providers. Importantly, the Commission in Order No. 1000 did not require non-public utility transmission providers to participate in regional transmission planning processes and corresponding cost allocation methods. Instead, the Commission encouraged such participation and noted that the success of the reforms called for in the rule would be enhanced if all transmission owners, including non-public utility transmission providers, participate. I will consider carefully concerns raised by non-public utility transmission providers as the Commission addresses further filings related to Order No. 1000 implementation.

The specific issues raised in your question regarding the Commission's rulings on Order No. 1000 compliance filings, such as the March 2013 WestConnect order, are currently pending before the Commission on rehearing. As a result, I cannot comment on them at this time.

**2. In September, 2013, Chair Whitfield together with 11 other Republican subcommittee members sent a letter to former FERC Chairman Wellinghoff asking the Commission to expand its examination of centralized capacity markets. The letter asked for this**

examination in light of the Commission's expressed goals in its Order No. 2000: to "promote efficiency in wholesale electricity markets and to ensure that electricity consumers pay the lowest price possible for reliable service."

Commissioner Norris recently issued a statement noting that a great deal of his time since he joined FERC in 2010 has been consumed with regulatory proceedings involving capacity markets, particularly those in the 3 Eastern RTOs. The same is certainly true for market participants, both those that have unbundled and especially those that remain vertically integrated. For such entities, which include many IOUs as well as electric co-ops and public power, meeting their load-serving obligations through self-supply, whether that be owned generation and/or through purchase power contracts, is the best way to achieve that Order No. 2000 goal; and preserving their right and ability to do so is their primary challenge in all these many regulatory proceedings.

Is there any reason why the right to self-supply cannot continue to exist within the capacity markets as currently constructed? Put differently, wouldn't limiting the ability of non-FERC-jurisdictional entities to make their own decisions regarding how best to meet their systems' needs fall outside the line of FERC's jurisdiction? And how would FERC justify such a limitation, given the stated goal of reliable service at the lowest possible cost?

Answer: I noted at the hearing that the Commission has opened an inquiry (Docket No. AD13-7-000) to consider how the current centralized capacity market rules and structures in the Eastern RTO/ISOs are supporting the procurement and retention of resources necessary to meet future reliability and operational needs. The issue you raise regarding the ability of load-serving entities to self-supply their capacity obligations is one of many issues that are under discussion in that proceeding.

To help inform the Commission's inquiry, in August 2013, Commission staff released a Staff Report examining the various design elements that make up the current centralized capacity markets.<sup>10</sup> In that report, Commission staff recognized that some customers may prefer to supply their own capacity outside of the centralized capacity market based on factors such as their view of market risk, desire for long-term arrangements, or business models. Staff noted, however, that the use of a demand curve (a central feature of the Eastern RTO/ISO centralized capacity markets) to approximate customer demand for capacity resources has implications for the ability of load-serving entities to self-supply capacity, including specific kinds of capacity resources they build or acquire to meet policy goals such as state renewable portfolio standards. Staff explained that whether to allow customers to self-supply, and if so, how the self-supply is reflected in the demand and supply curves, can impact the price signals sent by capacity markets. As a result, whether and to what extent load serving entities can opt to self-supply their capacity needs outside of the centralized capacity market varies among the three eastern RTOs/ISOs.<sup>11</sup>

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<sup>10</sup> "Centralized Capacity Market Design Elements", FERC Staff Paper (August 23, 2013), available at <http://www.ferc.gov/CalendarFiles/20130826142258-Staff%20Paper.pdf>.

<sup>11</sup> *Id.* at 8-9, 11.

This issue was discussed at length at the September 25, 2013 Commissioner-led technical conference in Docket No. AD13-7-000. Following that conference, the Commission issued a request for post-technical conference comments, which included questions exploring how the current market rules facilitate or hinder the ability of load-serving entities to self-supply, and whether the Commission should consider changes to the current capacity market designs to facilitate these arrangements. The Commission recently received over 1,000 pages of comments in response to that request, including comments regarding the ability to self-supply. The Commission is in the process of reviewing them and considering next steps as appropriate.

**3. In the Energy Policy Act of 2005 Congress enacted Federal Power Act section 211A which gave FERC certain limited jurisdiction over large transmitting electric cooperatives that are otherwise not generally FERC-jurisdictional. Since then FERC has at least twice declined to impose 211A on a generic basis and has not to date imposed 211 A conditions on a single co-op. Do you commit to following that precedent, reserving 211 A to be used only if and when needed on an individual case basis?**

Answer: Yes, I commit to using the Commission's authority under section 211A to be used only if and when needed on an individual case basis. I do not take the exercise of our authority under FPA section 211A lightly. The Commission has observed in a recent case that it expects that the need to use this statutory authority would be rare.<sup>12</sup>

**4. At last Thursday's hearing, we discussed a new technology that has been developed in Texas which will improve the usefulness of LPG- type products by enabling more hydrocarbon constituents to be mixed into them. As I understand it, LPG is a process patented in 1913 by Dr. Walter Snelling of the U.S. Bureau of Mines. FERC and DOE's predecessor agency determined that this product, like other NGLs was not natural gas and not subject to regulation. Since that time, in Texas and throughout the country, LPG has been produced, transported, consumed and freely exported without the need for regulation by the Federal Energy oversight agencies.**

**LPG is an important contributor to Texas' economy and, with the Shale Gas Revolution, is becoming increasingly valuable. I am not aware of any significant problems that have arisen during the 100 years or so that this regulatory approach has been followed.**

**My question is this. If there is a new proprietary process that increases the value and utility of LPG-type operations by enabling additional constituents found in petroleum or wellhead gas to be mixed in and if the product of that process is similar in characteristics to LPG, why doesn't it make sense to regulate that process in the same way you regulate LPG, and for that matter, what words in the law prevent you from taking that approach?**

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<sup>12</sup> *Iberdrola Renewables, Inc., v. Bonneville Power Administration*, 137 FERC ¶ 61,185 at P 32 (2011).

**I ask that you answer this question as promptly as practicable as I am advised by colleagues on the Committee that uncertainty is delaying deployment of these new technologies and achievement of the very substantial environmental and economic benefits which they offer.**

Answer: I do not anticipate the Commission changing how it defines “natural gas” for purposes of determining the scope of its jurisdiction under the Natural Gas Act. However, the transportation of natural gas liquids and other liquid hydrocarbons may be regulated under the Commission’s rate jurisdiction under the Interstate Commerce Act.

**The Honorable John Shimkus**

**1. Are you aware that the United States Military Academy (USMA) at West Point is at capacity for electric power and how would you describe this situation?**

Answer: The USMA is served by Orange and Rockland Utilities (O&R), which serves a population of approximately 750,000 in seven counties in New York, northern New Jersey, and northeastern Pennsylvania. Information obtained by FERC staff, but not yet confirmed with O&R or the USMA, indicates that the USMA is served by two 34.2-kV lines, which supply two substations on the western and southern boundaries of the USMA area. From the substations, power is distributed via 13.2-kV and 4.16-kV lines to various loads. Available information also suggests that the electrical demand appears to be approximately 90 percent of capacity for these facilities.

Like you, I recognize the importance of ensuring the integrity and reliability of the electric system that provides service to the USMA. However, the information summarized above indicates that the delivery of electricity to USMA is a State-regulated distribution function and not within FERC’s authority. The responses to questions 2-9 are better addressed by O&R and the New York State Public Service Commission (NYSPSC), which has regulatory authority over distribution systems in the State of New York.

**2. Has the transmission system at USMA been substantially upgraded since the 1970s?**

Answer: I do not know.

**3. What are the expected improvements for a typical transmission system that is 40 years old?**

Answer: Many facilities used to deliver electricity are more than 40 years old. While some of these facilities have required improvements or upgrades, it would be difficult to generalize about what is typical for timing and types of improvements or upgrades.

**4. Is there a general calculation used by utilities to forecast demand increase that would drive the upgrade of infrastructure?**

Answer: No, circumstances and approaches vary by location, types of customers, economic conditions and other factors.

**5. Is the age of the transmission system supporting USMA a concern?**

Answer: I do not have enough information to express an opinion on the facilities described above.

**6. Are utilities obligated to provide power requisite with current and future demand?**

Answer: Any such obligation for entities such as USMA depends on State law, and would be better addressed by the NYSPSC.

**7. Who is responsible for the funding of upgrades?**

Answer: For facilities such as those described above, this responsibility depends on State law, and would be better addressed by the NYSPSC.

**8. Are utility companies obligated to submit master plans or capital improvement plans? If so, what has been submitted with regard to USMA?**

Answer: FERC imposes no such obligation. I do not know if the State of New York does.

**9. How does USMA's electric energy use affect the neighboring communities, such as Highland Falls and Fort Montgomery?**

Answer: I do not know.

**The Honorable Michael C. Burgess**

**1. Commissioners, I join many of my colleagues who are concerned about a growing trend within Federal agencies to expand their jurisdiction without being given the authority by the Congress. Just because some long time government employee or employees may be predisposed one way or another, we are a nation of laws and even agencies are not exempt**

from the limitations placed on them by statutes we have passed that give them their jurisdiction.

There seems to be a good deal of uncertainty as to how FERC and DOE are regulating natural gas and natural gas export and exactly what "natural gas" is. I hope that, as new processes for recovering, transporting and storing hydrocarbons are developed, FERC and DOE will adhere to a strict construction of the statutory definition and not try to reach out and regulate products which are liquid, like LPGs, or which are specially manufactured to meet customer needs. Do you agree that we should interpret the law wherever possible in ways which minimize regulatory impediments?

Answer: I do not anticipate the Commission changing how it defines "natural gas" for purposes of determining the scope of its jurisdiction under the Natural Gas Act. However, the transportation of natural gas liquids and other liquid hydrocarbons may be regulated under the Commission's rate jurisdiction under the Interstate Commerce Act.

#### The Honorable David B. McKinley

At our hearing on December 5th, we discussed the definition of "natural gas," the application of that definition to Natural Gas Liquids and the effect of that application on new "solvation" technologies which produce liquid mixtures of selected natural gas and NGL constituents. I understand that these mixtures are similar in characteristics to LPG but can be effectively used to capture and transport any or all of the gas constituents that come out of the wellhead. As I noted, this technology can be extremely useful in capturing and recovering the significant volume of gas that is currently being flared in West Virginia and in alleviating the glut of certain gas constituents like ethane that currently exists in our region.

It is my understanding that the deployment of this technology in my state and others (Mr. Hall raised similar issues in his questioning) is being delayed by uncertainty as to whether FERC and DOE will treat this new mixture of gas and NGL constituents as a liquid like LPG and thus not subject to export controls and other regulatory strictures applicable to "natural gas" or, in the alternative, whether the natural gas definition will be stretched to cover this new technology and delay its implementation. I was heartened by the Chairman's assurance that there are no plans to redefine natural gas under the Natural Gas Act but would like answers to the following questions in order to resolve the uncertainties which are currently impeding the deployment of these new technologies.

1. My understanding is that both DOE and FERC have historically concluded that NGLs such as Propane, Ethane and LPG are not "natural gas" and may be produced, transported and exported without being subject to the facility siting and other regulatory restrictions which apply to natural gas. Are you aware of any policy reason for deviating from this approach and regulating either NGL facilities (particularly those other than pipelines) or the transportation and use of NGLs in a manner different than that which has



**been historically followed? Hasn't the current approach been essentially problem free? Is there any reason to expand jurisdiction and move into an area which has been problem free?**

Answer: The Commission has no pending proposal dealing with these technologies. However, I do not anticipate the Commission changing how it defines "natural gas" for purposes of determining the scope of its jurisdiction under the Natural Gas Act. However, the transportation of natural gas liquids and other liquid hydrocarbons may be regulated under the Commission's rate jurisdiction under the Interstate Commerce Act.

**2. As a matter of policy, should the mixtures created by new technologies which alter LPG, by incorporating into it additional hydrocarbon constituents found in wellhead gas, be treated like LPG, to which it is most similar in characteristics, or like pipeline quality natural gas, which is subject to regulation by FERC and DOE? Shouldn't it be our policy to minimize regulatory interference with business decisions where there is no demonstrated need for regulation?**

Answer: See Question 1.

**3. As a matter of law, how can it be determined that a process which mixes various constituents of wellhead gas, including Methane, into Propane and other NGLs to create a mixture of natural gas and natural gas liquids which is similar in characteristic to LPG, is either "natural gas unmixed" or a "mixture of natural and artificial gas" within the meaning of the Natural Gas Act of 1938.**

Answer: See Question 1.

**As I indicated at the hearing, uncertainty regarding these issues is delaying deployment of important new technologies which can be of great import in preventing waste and environmental harms while, at the same time, creating jobs and helping West Virginia's economy.**

#### The Honorable Jerry McNerney

**1. In California, we have a number of statutory and regulatory requirements that not only require development of new generation, but also the type of new generation. Is it the Commission's intent to let the ISOs (or in our case the States) lead in deciding whether capacity markets are necessary and, if so, to design them to reflect the unique features of the relevant market?**

Answer: The Commission has given RTO/ISO regions flexibility to determine, in consultation with their stakeholders, the best mechanisms for meeting resource adequacy needs. This

approach is reflected in the varied approaches taken by different RTO/ISOs across the country. In addition, where regions have chosen a centralized capacity market, the Commission has provided significant flexibility as to market design and has not mandated a “one size fits all” approach.

**2. My understanding is that some of the current capacity markets require local utilities to buy from the market. Public power utilities in Northern California just built a highly efficient and clean gas plant in my district. Will they be able to utilize this resource and self-supply, rather than being forced onto the market?**

Answer: Yes, the public power utilities in Northern California will be able to utilize their resources, including this new gas plant, to self-supply their capacity requirements. Some of the public power utilities that have ownership interest in this new plant are within the footprint of the organized market administered by the California Independent System Operator (CAISO). They are not members of CAISO, however, they do at times choose to sell into and buy from the CAISO market. Although load serving entities located within the CAISO footprint must submit supply plans to CAISO that show that they have procured adequate resources, nevertheless, how capacity procurement is done is not subject to CAISO's market rules. In short, according to CAISO rules, all load serving entities, including public power utilities, can self-supply from owned resources or enter into bilateral contracts to satisfy their capacity requirements, and thus these public power utilities can use the capacity and energy from this new plant to serve their members' needs.

**3. There has been recent discussion about whether FERC might push for lower returns for transmission investment. Can you comment on what you see FERC's role being at this time in providing a clear, consistent market signal for the transmission investment that this Committee has believed to be important for a number of years?**

Answer: The Commission has a number of cases pending on return on equity for electric transmission facilities, including complaints that seek to lower the allowed returns earned by transmission owners. Because these issues remain pending before the Commission in contested proceedings, I cannot comment on their merits. In addressing these cases, I will be mindful of establishing returns that are just and reasonable for both investors and consumers and provide adequate regulatory predictability through a principled outcome.

**The Honorable Eliot L. Engel**

The Commission has been focused on implementing policies which provide significant advantages to demand response resources relative to traditional generation, presumably because of their superior environmental impact. Yet, in some areas up to 1/3 of this demand response isn't the type use reduction and demand side management we normally conceive of when we're talking about demand response. Instead, a great deal of this

**actually appears to be load shifting rather than demand reduction and the load is being shifted from low emitting generation sources to inefficient, diesel-fueled, backup generators, that don't have environmental controls.**

**1. How this is consistent with the purported environmental benefits DR is supposed to bring?**

Answer: Providing appropriate competitive opportunities in organized electric markets for emerging resources such as demand response promotes efficient market outcomes and, therefore, just and reasonable rates for consumers. The Commission's initiatives with respect to demand response, in both generic proceedings such as the rulemakings that led to adoption of Order No. 719 and Order No. 745 and in response to filings related to individual RTOs and ISOs, have focused on promoting these goals. The Commission does not have statutory authority with respect to whether and how demand response resources comply with relevant environmental regulations. The EPA has conducted recent proceedings related to environmental regulation of certain behind-the-meter generators that can facilitate demand response. Individual states also may have environmental regulations that affect activities of demand response resources.

**A second problem seems to be that when this bundled demand response commits to provide system reliability 3 years ahead of time, it simply does not show up when it is needed.**

**2. What is the Commission doing to ensure these demand response resources are real, and are fully committed to meet their obligations for providing system reliability?**

Answer: In February 2013, the Commission directed public utilities to incorporate by reference updated business practice standards adopted by the Wholesale Electric Quadrant of the North American Energy Standards Board to support the measurement and verification of demand response and energy efficiency products in wholesale markets. In addition, I note that Commission staff regularly monitors and reviews reports provided by the organized wholesale markets that address the performance of demand response resources when called upon to maintain reliability. Commission staff has also initiated enforcement actions against demand response providers that had engaged in manipulative actions so seek compensation for demand response that was not actually provided. The Commission has ruled on and continues to consider a number of cases in the energy and capacity markets that relate to ensuring that the rules governing demand response performance and compensation are just and reasonable.

#### **The Honorable Gene Green**

**The liquefied petroleum gas (LPG) industry is an important component of the Texas oil and gas industry. In Texas, the Railroad Commission administers and enforces state laws and rules related to LPG, while the Environmental Protection Agency is responsible for**

oversight and regulation of emissions and clean air standards, and the U.S. Department of Transportation regulates some aspects of transportation.

**1. New technologies have now entered the marketplace for producing LPG-like products, called Compressed Gas Liquids that are customized blends of gas and gas liquids. How can we ensure that these new Compressed Gas Liquids products and facilities are similarly regulated to the LPG industry?**

Answer: The Commission has no pending proposal dealing with these technologies. However, I do not anticipate the Commission changing how it defines "natural gas" for purposes of determining the scope of its jurisdiction under the Natural Gas Act. However, the transportation of natural gas liquids and other liquid hydrocarbons may be regulated under the Commission's rate jurisdiction under the Interstate Commerce Act.

#### **The Honorable Mike Doyle**

**Manufacturing companies argue that they are overpaying for natural gas as a result of interstate pipeline rates. FERC needs to assure consumers that pipeline companies are charging a "just and reasonable" rate as required under the Natural Gas Act.**

**1. What is FERC doing to ensure that consumers are not overcharged?**

Answer: FERC conducts a yearly review of natural gas pipeline rates. FERC requires interstate natural gas pipeline or storage companies to file a FERC Form No. 2 or 2-A (Form 2) report, which provides detailed financial and operational information from the prior calendar year. FERC uses the Form 2 information to determine whether to investigate the rates charged by interstate natural gas pipeline or storage companies by calculating the earned equity return for each of the pipelines or storage companies filing Form 2. Since 2009, the FERC has initiated ten NGA section 5 rate proceedings to investigate whether rates charged by certain interstate natural gas pipelines or storage companies were just and reasonable. These proceedings resulted in various benefits to the pipeline or storage company's customers, such as reduced transportation rates, reduced fuel retention rates, a revenue sharing mechanism, agreements to provide detailed revenue data, and, depending on the circumstances, agreements to file or to refrain from filing section 4 cases. Seven of the cases resulted in lower rates for customers totaling \$194 million per year.

In addition to using its investigative authority to conduct section 5 rate proceedings, the Commission closely monitors all rate change filings made by jurisdictional gas pipeline and storage operators. In order to determine whether a rate increase is just and reasonable, the Commission routinely suspends such tariff filings to ensure a refund liability for the filing entity and sets the matter for hearing. Most such cases result in Commission-approved settlements that establish appropriate rates and provide for refunds and reductions in future rates. Over the period 2008-13, the cumulative savings to customers from gas pipeline rate settlements (both one-time refunds and ongoing reductions in rates) totaled \$3.35 billion. This is another means

by which the Commission assures that interstate gas pipeline and storage customers are not being overcharged.

**The Natural Gas Supply Association conducts a study every year using Form 2 data that pipelines are required to file with the FERC. The latest report indicated that that pipelines are overcharging by \$3 .4 billion. This seems to be a problem in the sense that these dollars are coming from consumers.**

**2. Some have suggested that one way to address the issue would be reform of the Natural Gas Act to ensure that customers (after proving that they have been overcharged by interstate pipelines) can receive a refund back to the date of a filed complaint- a change that would give gas customers the same protections afforded under law to electricity customers since 1988. What are your thoughts on this?**

Answer: I agree that the challenge with a NGA section 5 proceeding is that any new rate, term, or condition has only prospective application and support adding a refund provision to section 5 of the NGA because such a provision would encourage prompt resolution by removing the incentive to engage in protracted litigation in order to postpone having to pay any refunds that might be ordered to customers.

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115  
Majority (202) 225-2927  
Minority (202) 225-3641  
January 10, 2014

The Honorable Phillip D. Moeller  
Commissioner  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Dear Commissioner Moeller:

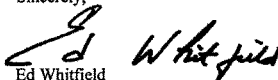
Thank you for appearing before the Subcommittee on Energy and Power on Thursday, December 5, 2013, to testify at the hearing entitled "Evaluating the Role of FERC in a Changing Energy Landscape."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Friday, January 24, 2014. Your responses should be e-mailed to the Legislative Clerk in Word format at [Nick.Abraham@mail.house.gov](mailto:Nick.Abraham@mail.house.gov) and mailed to Nick Abraham, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

  
Ed Whitfield  
Chairman  
Subcommittee on Energy and Power

cc: The Honorable Bobby L. Rush, Ranking Member,  
Subcommittee on Energy and Power

Attachment

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426



*Office of Commissioner Philip D. Moeller*

January 27, 2014

The Honorable Ed Whitfield  
Chairman  
Subcommittee on Energy and Power  
United States House of Representatives  
Washington, DC 20515

Dear Chairman Whitfield:

Thank you for your continuing interest in our work at the Federal Energy Regulatory Commission (FERC), and for providing me with an opportunity to express my views during your oversight hearing "Evaluating the Role of FERC in a Changing Energy Landscape".

Enclosed is my response to your questions. As always, I am available to meet with you to discuss this or any other matter concerning the work of the Commission.

Sincerely,

A black rectangular redaction box covers the signature of Philip D. Moeller.

Philip D. Moeller

Answers of Commissioner Philip Moeller to  
Additional Questions for the Record

**The Honorable Ed Whitfield**

**1. Last year, EPA projected that less than 10 gigawatts of the nation's coal-fired generation would retire by 2015 as a result of EPA's new and proposed regulations impacting the power sector. It's not quite 2014 and already 50 gigawatts of coal-fired power generation have announced closure or early retirement at least partly because of EPA's regulations. You can't eliminate 50,000 megawatts of baseload generation from the electricity portfolio in such a short time period and not expect some negative impacts on reliability.**

**a. As the agency responsible for ensuring the reliability of the electric grid, do you share my concerns that these retirements could negatively impact reliability?**

Answer: Yes, absolutely. A very significant amount of generation has been retired in a very short time frame. This has the potential to create reliability issues in specific load pockets. Of most concern to me is the summer of 2016, by which time even more generation is expected to retire. Several regions within the United States could experience reliability challenges, but of most concern is the footprint of the Midcontinent Independent System Operator (MISO) that is projecting reserve margins below eight percent. It is important to recognize that under MISO rules, shortages are shared throughout the region. If load has to be curtailed to maintain system reliability, potentially all 15 states could experience load shedding if the system is stressed due to hot weather or other forces. Although MISO and many entities including the affected states are working to address this situation, it is worth monitoring very closely.

**b. How much coordination has FERC had with EPA on the reliability impacts of EPA's power sector regulations?**

Answer: Although FERC staff continues to communicate with EPA and the regions on the status of the regulations and their impacts, particularly the "MATS" regulation, I would prefer a more formal and transparent communication process. Conditions are changing quickly as more retirements are announced and as more analysis is conducted on the reliability implications of these retirements.

**c. To what extent did EPA coordinate with FERC prior to issuing its recently proposed greenhouse gas standards for new fossil fuel-fired power plants?**

Answer: As noted above, FERC staff continues to communicate with EPA. I have been informed that those interactions, however, have not focused on the proposed GHG standards for new fossil fuel-fired power plants.

**2. If the Administration continues down its path of taking fuel choice decisions away from the electric industry, and reducing fuel diversity, what negative consequences would you expect?**



Answer: Reducing fuel diversity has the potential to increase electricity price volatility and increase electricity prices overall, depending on the price of fuel. Fuel diversity also helps to ensure a reliable power grid. History shows that every source of fuel will occasionally face problems in generating energy, but with multiple sources of fuel, those problems will have less of an impact on our ability to have electricity when we need it.

**3. You have been very active in promoting greater coordination between the natural gas sector and the electricity sector given the greater reliance on natural gas to generate electricity. Can you please provide us with an update on the progress FERC has made with respect to these coordination efforts? What next steps does FERC have planned?**

Answer: The Commission continues to engage with state policymakers and industry on issues related to gas and electric coordination. This dialogue began in early 2012 when, noting the growing dependence on natural gas for power generation, I requested written comments from the public on a series of gas-electric coordination questions and concerns. The Commission continued this dialogue by opening a formal docket and following up in August 2012 with a series of regional conferences across the country to gather additional information. Since then, Commission staff has actively monitored gas-electric coordination activities taking place at the regional level, and conducted outreach to assess progress being made within each region. The Commission received quarterly reports from its staff on gas-electric coordination activities throughout 2013, and will continue to receive such reports throughout 2014. In addition, all seven RTO/ISOs appear before the Commission on May 16, 2013, and October 17, 2013, to share their experiences managing natural gas and electric coordination during the winter and spring, and summer and fall, respectively. During their last appearance before the Commission, the RTO/ISOs reported on their progress in addressing gas-electric issues, including the initiation of a broad study of natural gas infrastructure needs across the Eastern Interconnection, and also shared their expectations for the 2013-2014 winter heating season.

Through these activities, we have learned that gas-electric coordination issues are typically regional in nature, and vary depending on each region's particular infrastructure, supply and demand conditions, and market structures. However, the Commission has identified two sets of common issues across all regions: communication and information sharing between the two industries, and scheduling practices between the gas and electric industries. To address continued concerns regarding communications and information sharing between the industries, on November 15, 2013, the Commission issued a Final Rule (Order No. 787) providing explicit authority to interstate natural gas pipelines and public utilities that own, operate or control facilities used for the transmission of electric energy in interstate commerce to voluntarily share non-public, operational information with each other, subject to a No-Conduit Rule which prohibits sharing this information with a third-party. This Final Rule became effective on December 23, 2013. As I mentioned in the hearing, I thank the Office of Management and Budget for an expedited effective date. The Final Rule recognized that some pipelines or public utilities may have existing tariff provisions that preclude a communication that would otherwise be authorized by the Final Rule. Since the Final Rule became effective, both pipelines and

public utilities have submitted to the Commission proposed revisions to their tariffs to permit the communications authorized under Order No. 787. The Commission has taken prompt action on these filings to allow for the information sharing pipelines and public utilities deem necessary to promote the reliability and integrity of their systems. During the recent extreme cold weather experienced on January 6-7, 2014, the communications permitted by this Final Rule proved useful to electric system operators in maintaining reliability.

The Commission also continues to consider opportunities to better coordinate the scheduling of natural gas and electricity markets in light of increased reliance on natural gas for electric generation. Through a series of regional gas-electric technical conferences held in the summer of 2012, industry participants highlighted the need for greater alignment of natural gas and electric scheduling practices. Therefore, at the direction of the Commission, staff conducted a further technical conference in April 2013 which focused on natural gas and electric scheduling practices --- the conference included topics such as whether and how utilities can most effectively match their scheduling times with the nationwide natural gas scheduling timeline, and whether additional opportunities for nominating natural gas pipeline capacity can be provided and, if so, under what conditions. The Commission is currently reviewing the record developed at that technical conference, and the comments that were filed following the technical conference, and is examining opportunities for further Commission action.

**4. Should behind-the-meter generation be treated as a demand response resource or a generation resource? What is the justification for treating behind-the-meter generation differently from traditional generation in terms of how it is compensated in the market, and the accountability to deliver as promised?**

Answer: While behind-the-meter-generation (BTMG), as its name implies, is a bona-fide generation resource, BTMG is also commonly employed as a demand response resource during periods of peak demand when traditional forms of dispatchable generation may not be sufficient to meet the need for power in a specific area or “load pocket”. While BTMG is considered to be both a demand response resource and a generation resource, its physical characteristics and impacts differ from what people typically consider to be “demand response” or load reduction (i.e., an actual reduction in power usage). Notably, the dispatch of BTMG (which often consists of older diesel-fired units, lacking advanced emissions controls) has identifiable negative externalities, such as increased air pollution during peak periods, particularly on the hottest summer days. As such, I do not believe that BTMG resources are comparable to other forms of demand response and I am concerned that the continuing, and not insubstantial, participation of BTMG in demand response programs will undermine efforts towards improving air quality.

With regard to BTMG’s accountability to deliver its resource when needed, I understand that in some organized electricity markets, the grid operator is unable to dispatch these resources directly from the control room and may have difficulty in measuring and verifying whether a load reduction is being effectuated in real time. In terms of compensation, the organized electricity markets have been ordered by the FERC, consistent with Order No. 745 to compensate all forms of demand response, including BTMG, in a manner that I believe results in the overcompensation of demand response resources as compared to traditional generating resources (e.g., power plants, wind farms, and hydro-electric projects). My explanation of why I

believe demand response resources are being overcompensated is discussed at length in my dissenting opinion to Order No. 745 (Demand Response Compensation in Organized Wholesale Energy Markets, 134 FERC ¶ 61,187, March 15, 2011), which is currently pending a decision before the United States Court of Appeals for the District of Columbia Circuit.

**5. I understand from hydropower owners and operators that there is hydropower licensing cases in which two or more federal agencies, contained within different departments, regulate the same activity under the license for a single hydropower project. These conflicting requirements on the owner/operator increase delays and project costs.**

**a. What steps can FERC take to promote greater efficiency, predictability and balance in the process for licensing and relicensing of hydropower projects?**

Answer: The Commission makes every effort, within the constraints of the Federal Power Act and other statutes to promote efficiency, predictability, and balance in the hydropower licensing process.

Federal agencies have mandatory conditioning authority with respect to FERC licenses under either FPA section 4(e) (conditions for projects on federal lands) or 18 (fishway prescriptions), and, effectively, under the Endangered Species Act. Likewise, states can condition FERC licenses via their Clean Water Act Section 401 water quality certification authority. Under current law, the Commission has no authority to modify these conditions. As you noted, occasionally the Commission receives conflicting conditions from the agencies with respect to the same activity or resource. The Commission's options for resolving such cases are limited by the extent of the agencies' willingness to modify their conditions. In some such cases, convening a technical conference with the agencies, or engaging in alternative dispute resolution is sufficient to resolve the inconsistency. If the conflict cannot be resolved, the Commission has the option of issuing the license and doing its best to help the parties resolve conflicts that arise during the license term, or it may choose not to issue the license. As I mentioned during the hearing, Congress may want to consider setting deadlines for other agencies to act, or alternatively Congress may want to consider giving the Commission greater authority to determine whether conditions proposed by other agencies are appropriate for the project under consideration.

**The Honorable John Shimkus**

**1. Are you aware that the United States Military Academy (USMA) at West Point is at capacity for electric power and how would you describe this situation?**

Answer: Please see Acting Chairman Cheryl LaFleur's response, as I concur with her reasoning and answers related to this set of questions.

**2. Has the transmission system at USMA been substantially upgraded since the 1970s?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**3. What are the expected improvements for a typical transmission system that is 40 years old?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**4. Is there a general calculation used by utilities to forecast demand increase that would drive the upgrade of infrastructure?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**5. Is the age of the transmission system supporting USMA a concern?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**6. Are utilities obligated to provide power requisite with current and future demand?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**7. Who is responsible for the funding of upgrades?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**8. Are utility companies obligated to submit master plans or capital improvement plans? If so, what has been submitted with regard to USMA?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**9. How does USMA's electric energy use affect the neighboring communities, such as Highland Falls and Fort Montgomery?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**The Honorable Michael C. Burgess**

- 1. Commissioners, I join many of my colleagues who are concerned about a growing trend within Federal agencies to expand their jurisdiction without being given the authority by the Congress. Just because some long time government employee or employees may be predisposed one way or another, we are a nation of laws and even agencies are not exempt from the limitations placed on them by statutes we have passed that give them their jurisdiction.**

There seems to be a good deal of uncertainty as to how FERC and DOE are regulating natural gas and natural gas export and exactly what "natural gas" is. I hope that, as new processes for recovering, transporting and storing hydrocarbons are developed, FERC and DOE will adhere to a strict construction of the statutory definition and not try to reach out and regulate products which are liquid, like LPGs, or which are specially manufactured to meet customer needs. Do you agree that we should interpret the law wherever possible in ways which minimize regulatory impediments?

Answer: Generally, yes. Please see Acting Chairman Cheryl LaFleur's response, as I concur with her reasoning and answer.

**The Honorable David B. McKinley**

At our hearing on December 5th, we discussed the definition of "natural gas," the application of that definition to Natural Gas Liquids and the effect of that application on new "solvation" technologies which produce liquid mixtures of selected natural gas and NGL constituents. I understand that these mixtures are similar in characteristics to LPG but can be effectively used to capture and transport any or all of the gas constituents that come out of the wellhead. As I noted, this technology can be extremely useful in capturing and recovering the significant volume of gas that is currently being flared in West Virginia and in alleviating the glut of certain gas constituents like ethane that currently exists in our region.

It is my understanding that the deployment of this technology in my state and others (Mr. Hall raised similar issues in his questioning) is being delayed by uncertainty as to whether FERC and DOE will treat this new mixture of gas and NGL constituents as a liquid like LPG and thus not subject to export controls and other regulatory strictures applicable to "natural gas" or, in the alternative, whether the natural gas definition will be stretched to cover this new technology and delay its implementation. I was heartened by the Chairman's assurance that there are no plans to redefine natural gas under the Natural Gas Act but would like answers to the following questions in order to resolve the uncertainties which are currently impeding the deployment of these new technologies.

1. My understanding is that both DOE and FERC have historically concluded that NGLs such as Propane, Ethane and LPG are not "natural gas" and may be produced, transported and exported without being subject to the facility siting and other regulatory restrictions which apply to natural gas. Are you aware of any policy reason for deviating from this approach and regulating either NGL facilities (particularly those other than pipelines) or the transportation and use of NGLs in a manner different than that which has been historically followed? Hasn't the current approach been essentially problem free? Is there any reason to expand jurisdiction and move into an area which has been problem free?

Answer: Please see Acting Chairman Cheryl LaFleur's response.

2. As a matter of policy, should the mixtures created by new technologies which alter LPG, by incorporating into it additional hydrocarbon constituents found in wellhead gas, be treated like LPG, to which it is most similar in characteristics, or like pipeline quality natural gas, which is subject to regulation by FERC and DOE? Shouldn't it be our policy to minimize regulatory interference with business decisions where there is no demonstrated need for regulation?

Answer: For these three questions, please see Acting Chairman Cheryl LaFleur's response as I agree with her reasoning and answers.

3. As a matter of law, how can it be determined that a process which mixes various constituents of wellhead gas, including Methane, into Propane and other NGLs to create a mixture of natural gas and natural gas liquids which is similar in characteristic to LPG, is either "natural gas unmixed" or a "mixture of natural and artificial gas" within the meaning of the Natural Gas Act of 1938.

Answer: Please see Acting Chairman Cheryl LaFleur's response.

As I indicated at the hearing, uncertainty regarding these issues is delaying deployment of important new technologies which can be of great import in preventing waste and environmental harms while, at the same time, creating jobs and helping West Virginia's economy.

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**transmission investment that this Committee has believed to be important for a number of years?**

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The Commission has been focused on implementing policies which provide significant advantages to demand response resources relative to traditional generation, presumably because of their superior environmental impact. Yet, in some areas up to 1/3 of this demand response isn't the type use reduction and demand side management we normally conceive of when we're talking about demand response. Instead, a great deal of this actually appears to be load shifting rather than demand reduction and the load is being shifted from low emitting generation sources to inefficient, diesel-fueled, backup generators, that don't have environmental controls.

**1. How this is consistent with the purported environmental benefits DR is supposed to bring?**

Answer: For these two questions, please see Acting Chairman Cheryl LaFleur's response, as I agree with her reasoning and her answers. However in terms of compensation, the organized electricity markets have been ordered by the FERC, consistent with Order No. 745 to compensate all forms of demand response, including BTMG (Behind-the-Meter-Generation), in a manner that I believe results in the overcompensation of demand response resources as compared to traditional generating resources (e.g., power plants, wind farms, and hydro-electric projects). My explanation of why I believe demand response resources are being overcompensated is discussed at length in my dissenting opinion to Order No. 745 (Demand Response Compensation in Organized Wholesale Energy Markets, 134 FERC ¶ 61,187, March 15, 2011), which is currently pending a decision before the United States Court of Appeals for the District of Columbia Circuit.

**A second problem seems to be that when this bundled demand response commits to provide system reliability 3 years ahead of time, it simply does not show up when it is needed.**

**1. What is the Commission doing to ensure these demand response resources are real, and are fully committed to meet their obligations for providing system reliability?**

Answer: Please see Acting Chairman Cheryl LaFleur's response.

**The Honorable Gene Green**

The liquefied petroleum gas (LPG) industry is an important component of the Texas oil and gas industry. In Texas, the Railroad Commission administers and enforces state laws and rules related to LPG, while the Environmental Protection Agency is responsible for oversight and regulation of emissions and clean air standards, and the U.S. Department of Transportation regulates some aspects of transportation.

1. New technologies have now entered the marketplace for producing LPG-like products, called Compressed Gas Liquids that are customized blends of gas and gas liquids. How can we ensure that these new Compressed Gas Liquids products and facilities are similarly regulated to the LPG industry?

Answer: For this question, please see Acting Chairman Cheryl LaFleur's response as I agree with her reasoning and her answer.

**The Honorable Mike Doyle**

Manufacturing companies argue that they are overpaying for natural gas as a result of interstate pipeline rates. FERC needs to assure consumers that pipeline companies are charging a "just and reasonable" rate as required under the Natural Gas Act.

1. What is FERC doing to ensure that consumers are not overcharged?

Answer: Please see Acting Chairman Cheryl LaFleur's response, as I agree with her reasoning and answer.

The Natural Gas Supply Association conducts a study every year using Form 2 data that pipelines are required to file with the FERC. The latest report indicated that that pipelines are overcharging by \$3 .4 billion. This seems to be a problem in the sense that these dollars are coming from consumers.

2. Some have suggested that one way to address the issue would be reform of the Natural Gas Act to ensure that customers (after proving that they have been overcharged by interstate pipelines) can receive a refund back to the date of a filed complaint- a change that would give gas customers the same protections afforded under law to electricity customers since 1988. What are your thoughts on this?

Answer: I have consistently stated that I would support such a reform.



FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115  
Majority (202) 225-2927  
Minority (202) 225-3841  
January 10, 2014

The Honorable John R. Norris  
Commissioner  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Dear Commissioner Norris:

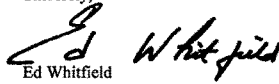
Thank you for appearing before the Subcommittee on Energy and Power on Thursday, December 5, 2013, to testify at the hearing entitled "Evaluating the Role of FERC in a Changing Energy Landscape."

Pursuant to the Rules of the Committee on Energy and Commerce, the hearing record remains open for ten business days to permit Members to submit additional questions for the record, which are attached. The format of your responses to these questions should be as follows: (1) the name of the Member whose question you are addressing, (2) the complete text of the question you are addressing in bold, and (3) your answer to that question in plain text.

To facilitate the printing of the hearing record, please respond to these questions with a transmittal letter by the close of business on Friday, January 24, 2014. Your responses should be e-mailed to the Legislative Clerk in Word format at [Nick.Abraham@mail.house.gov](mailto:Nick.Abraham@mail.house.gov) and mailed to Nick Abraham, Legislative Clerk, Committee on Energy and Commerce, 2125 Rayburn House Office Building, Washington, D.C. 20515.

Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

  
Ed Whitfield  
Chairman  
Subcommittee on Energy and Power

cc: The Honorable Bobby L. Rush, Ranking Member,  
Subcommittee on Energy and Power

Attachment

**FEDERAL ENERGY REGULATORY COMMISSION**  
**WASHINGTON, DC 20426**

**OFFICE OF THE COMMISSIONER**

January 24, 2014

The Honorable Ed Whitfield, Chairman  
Subcommittee on Energy and Power  
Committee on Energy and Commerce  
U.S. House of Representatives  
2125 Rayburn House Office Building  
Washington, D.C. 20515

Dear Chairman Whitfield:

Thank you for the opportunity to appear before the Subcommittee on Energy and Power on December 5, 2013. Enclosed, please find my responses to the Questions for the Record of January 10, 2014. Please do not hesitate to contact me if you have any further questions or would like to discuss these responses.

Sincerely,



## Questions for the Record

**The Honorable Ed Whitfield**

**1. You were recently quoted by the news outlet Smart Grid Today stating: "I am concerned, because we are making long-term investments in both pipeline and generation facilities for utilization of gas for base-load or intermediate load generation and if we are to reach [the Obama] administration's goals of an 80% reduction of CO2 by 2050, from 2005 numbers, you can't have this."**

**a. I am concerned your views regarding achieving the President's CO2 emissions targets could affect your decision-making when it comes to making decisions on siting natural gas pipelines and LNG projects. How do you reconcile your personal climate views and your duties as a Commissioner of an independent agency?**

My responsibility as a Commissioner is to make natural gas pipeline and LNG siting determinations in accordance with the statutory responsibility that Congress granted to the Commission. My personal views on climate change do not impact my decision-making regarding siting natural gas pipeline and LNG projects. I have voted numerous times to approve pipeline certificates and LNG projects. I will continue to make decisions on the siting of natural gas pipelines and LNG projects as I believe I have throughout my tenure on the Commission to date. I will apply the laws to the facts in the record before the Commission.

**b. What statutory authority do you think FERC has to achieve the President's CO2 emissions targets?**

I do not believe that the Commission has statutory authority to achieve the President's CO2 emissions targets.

**2. Other than for environmental reasons, do you believe that FERC has the authority to deny an application for an LNG export facility?**

Yes, the Commission also considers potential safety concerns in evaluating an application for an LNG export facility.

**The Honorable John Shimkus**

**1. Are you aware that the United States Military Academy (USMA) at West Point is at capacity for electric power and how would you describe this situation?**

As the Chairman noted in her more comprehensive response, the USMA is served by Orange and Rockland Utilities (O&R). Delivery of electricity to USMA is a state-regulated distribution function and not within FERC's authority. Additionally, while I provide responses to questions 2-9 when possible below, several of these questions are better addressed by O&R and the New York State Public Service Commission (NYSPSC), which has regulatory authority over distribution systems in the State of New York.

**2. Has the transmission system at USMA been substantially upgraded since the 1970s?**

I do not have any information regarding upgrades at USMA electricity facilities.

**3. What are the expected improvements for a typical transmission system that is 40 years old?**

Many transmission and distribution facilities utilized today are 40 years and older. Whether upgrades are needed could depend upon the specific nature of the facilities. For example, there could be certain facilities that are less than 40 years old that require improvements, while there may be facilities 40 years old and older that are sufficiently meeting system needs.

**4. Is there a general calculation used by utilities to forecast demand increase that would drive the upgrade of infrastructure?**

I do not think there is a one-size-fits-all solution or approach for utilities to forecast demand that would drive infrastructure upgrades. Such upgrades depend upon customer demand, system conditions, and many other factors that are fact specific in nature.

**5. Is the age of the transmission system supporting USMA a concern?**

I do not have knowledge regarding the condition of the facilities serving USMA.

**6. Are utilities obligated to provide power requisite with current and future demand?**

Such utility obligations to serve fall under state, rather than federal, jurisdiction.

**7. Who is responsible for the funding of upgrades?**

Funding of upgrades for such facilities also falls under state, rather than federal, jurisdiction.

**8. Are utility companies obligated to submit master plans or capital improvement plans? If so, what has been submitted with regard to USMA?**

Any such obligations to submit master plans would be subject to state, rather than federal, law.

**9. How does USMA's electric energy use affect the neighboring communities, such as Highland Falls and Fort Montgomery?**

I do not have any information regarding how USMA's energy usage impacts neighboring communities.

**The Honorable Michael C. Burgess**

**1. Commissioners, I join many of my colleagues who are concerned about a growing trend within Federal agencies to expand their jurisdiction without being given the authority by the Congress. Just because some long time government employee or employees may be predisposed one way or another, we are a nation of laws and even agencies are not exempt from the limitations placed on them by statutes we have passed that give them their jurisdiction.**

There seems to be a good deal of uncertainty as to how FERC and DOE are regulating natural gas and natural gas export and exactly what "natural gas" is. I hope that, as new processes for recovering, transporting and storing hydrocarbons are developed, FERC and DOE will adhere to a strict construction of the statutory definition and not try to reach out and regulate products which are liquid, like LPGs, or which are specially manufactured to meet customer needs. Do you agree that we should interpret the law wherever possible in ways which minimize regulatory impediments?

As a federal agency, the Commission's role is to implement the laws established by Congress. The Commission must act consistent with the legislative intent, neither minimizing nor expanding the agency's prescribed role while ensuring regulatory certainty and stability to the extent possible.

**The Honorable David B. McKinley**

At our hearing on December 5th, we discussed the definition of "natural gas," the application of that definition to Natural Gas Liquids and the effect of that application on new "solvation" technologies which produce liquid mixtures of selected natural gas and NGL constituents. I understand that these mixtures are similar in characteristics to LPG but can be effectively used to capture and transport any or all of the gas constituents that come out of the wellhead. As I noted, this technology can be extremely useful in capturing and recovering the significant volume of gas that is currently being flared in West Virginia and in alleviating the glut of certain gas constituents like ethane that currently exists in our region.

It is my understanding that the deployment of this technology in my state and others (Mr. Hall raised similar issues in his questioning) is being delayed by uncertainty as to whether FERC and DOE will treat this new mixture of gas and NGL constituents as a liquid like LPG and thus not subject to export controls and other regulatory strictures applicable to "natural gas" or, in the alternative, whether the natural gas definition will be stretched to cover this new technology and delay its implementation. I was heartened by the Chairman's assurance that there are no plans to redefine natural gas under the Natural Gas Act but would like answers to the following questions in order to resolve the uncertainties which are currently impeding the deployment of these new technologies.

1. My understanding is that both DOE and FERC have historically concluded that NGLs such as Propane, Ethane and LPG are not "natural gas" and may be produced, transported and exported without being subject to the facility siting and other regulatory restrictions which apply to natural gas. Are you aware of any policy reason for deviating from this approach and regulating either NGL facilities (particularly those other than pipelines) or the transportation and use of NGLs in a manner different than that which has been historically followed? Hasn't the current approach been essentially problem free? Is there any reason to expand jurisdiction and move into an area which has been problem free?

As the Chairman indicated in her response, there are no pending proposals before the Commission that address these technologies, and transportation of natural gas liquids and other liquid hydrocarbons are generally regulated under the Commission's rate jurisdiction under the Interstate Commerce Act. Furthermore, I am not aware of any intent or need to change the definition of natural gas as it is applied under the Natural Gas Act.

2. As a matter of policy, should the mixtures created by new technologies which alter LPG, by incorporating into it additional hydrocarbon constituents found in wellhead gas, be treated like LPG, to which it is most similar in characteristics, or like pipeline quality natural gas, which is subject to regulation by FERC and DOE? Shouldn't it be our policy to minimize regulatory interference with business decisions where there is no demonstrated need for regulation?

The Commission's exercise of its duties is not based on whether there is a demonstrated need, but instead based on direction from Congress through statute. The Commission must act consistent with the legislative intent, neither minimizing nor expanding the agency's prescribed role while ensuring regulatory certainty and stability to the extent possible.

3. As a matter of law, how can it be determined that a process which mixes various constituents of wellhead gas, including Methane, into Propane and other NGLs to create a mixture of natural gas and natural gas liquids which is similar in characteristic to LPG, is either "natural gas unmixed" or a "mixture of natural and artificial gas" within the meaning of the Natural Gas Act of 1938.

An entity could file a petition for declaratory order asking the Commission to make a jurisdictional determination. The Commission would then decide based on the specific facts before it.

As I indicated at the hearing, uncertainty regarding these issues is delaying deployment of important new technologies which can be of great import in preventing waste and environmental harms while, at the same time, creating jobs and helping West Virginia's economy.

The Honorable Jerry McNerney

1. In California, we have a number of statutory and regulatory requirements that not only require development of new generation, but also the type of new generation. Is it the Commission's intent to let the ISOs (or in our case the States) lead in deciding whether capacity markets are necessary and, if so, to design them to reflect the unique features of the relevant market?

While I cannot speak for the Commission, I believe that capacity markets should be voluntary and that states and regions should make the decision whether or not to implement such a market. I am hopeful that, to the extent possible, states and Independent System Operators will be able to design capacity markets to reflect the unique features of the relevant market, while also benefiting from the lessons learned from capacity markets in other regions of the country.

2. My understanding is that some of the current capacity markets require local utilities to buy from the market. Public power utilities in Northern California just built a highly efficient and clean gas plant in my district. Will they be able to utilize this resource and self-supply, rather than being forced onto the market?

As you may be aware, the Commission recently held a technical conference to consider how current centralized capacity market rules and structures are supporting the procurement and retention of resources necessary to meet future reliability and operational needs. One issue of particular interest to me is how entities that wish to self-supply are treated in centralized capacity markets. I am carefully reviewing the

comments we received on this and other capacity market issues. There currently is no centralized capacity market construct in California, and thus utilities including public power entities are not required to offer their resources into a market and may self-supply to meet their resource adequacy obligations. Should California decide to voluntarily establish a centralized capacity market, self-supply issues may impact the market design that entities propose. I will keep an open mind about any proposals that are brought to the Commission for approval.

**3. There has been recent discussion about whether FERC might push for lower returns for transmission investment. Can you comment on what you see FERC's role being at this time in providing a clear, consistent market signal for the transmission investment that this Committee has believed to be important for a number of years?**

I do not believe that the Commission should push for lower or higher returns on transmission investment. Our statutory responsibility is to ensure that transmission rates remain just and reasonable with a fair rate of return on transmission investment that recognizes the importance of transmission in maintaining reliability, fostering competitive wholesale markets, and accessing location-constrained resources.

**The Honorable Eliot L. Engel**

The Commission has been focused on implementing policies which provide significant advantages to demand response resources relative to traditional generation, presumably because of their superior environmental impact. Yet, in some areas up to 1/3 of this demand response isn't the type use reduction and demand side management we normally conceive of when we're talking about demand response. Instead, a great deal of this actually appears to be load shifting rather than demand reduction and the load is being shifted from low emitting generation sources to inefficient, diesel-fueled, backup generators, that don't have environmental controls.

**1. How this is consistent with the purported environmental benefits DR is supposed to bring?**

In recent years, we have implemented Commission policies intended to facilitate the integration of demand resource resources into our energy grid. Such policies have focused on market rules that are resource-neutral in order to ensure that there is a level playing field for all resources that want to participate in FERC-jurisdictional energy markets, including demand response resources. I do not agree that the Commission's policies with respect to demand response resources are driven by a consideration of the environmental benefits provided by such resources. I believe that demand response resources provide real market benefits by allowing consumers to shift energy usage to off-peak hours, reducing the costs for consumers. By allowing energy users to reduce load during times of peak demand, demand response resources are also a valuable tool for maintaining reliable electric service.

**A second problem seems to be that when this bundled demand response commits to provide system reliability 3 years ahead of time, it simply does not show up when it is needed.**

**2. What is the Commission doing to ensure these demand response resources are real, and are fully committed to meet their obligations for providing system reliability?**

While I cannot discuss specific matters that are currently before the Commission, I believe there should be rules in place to ensure that resources satisfy their reliability obligations. If any resource fails to do so,

there should be measures in place to ensure that system reliability is maintained.

**The Honorable Gene Green**

The liquefied petroleum gas (LPG) industry is an important component of the Texas oil and gas industry. In Texas, the Railroad Commission administers and enforces state laws and rules related to LPG, while the Environmental Protection Agency is responsible for oversight and regulation of emissions and clean air standards, and the U.S. Department of Transportation regulates some aspects of transportation.

1. New technologies have now entered the marketplace for producing LPG-like products, called Compressed Gas Liquids that are customized blends of gas and gas liquids. How can we ensure that these new Compressed Gas Liquids products and facilities are similarly regulated to the LPG industry?

As the Chairman indicated in her response, there are no pending proposals before the Commission that address these technologies, and transportation of natural gas liquids and other liquid hydrocarbons are generally regulated under the Commission's rate jurisdiction under the Interstate Commerce Act. Furthermore, I am not aware of any intent or need to change the definition of natural gas as it is applied under the Natural Gas Act.

**The Honorable Mike Doyle**

Manufacturing companies argue that they are overpaying for natural gas as a result of interstate pipeline rates. FERC needs to assure consumers that pipeline companies are charging a "just and reasonable" rate as required under the Natural Gas Act.

1. What is FERC doing to ensure that consumers are not overcharged?

The Natural Gas Supply Association conducts a study every year using Form 2 data that pipelines are required to file with the FERC. The latest report indicated that pipelines are overcharging by \$3.4 billion. This seems to be a problem in the sense that these dollars are coming from consumers.

The Commission has the responsibility under Natural Gas Act (NGA) sections 4 and 5 to ensure that rates are just and reasonable. When a natural gas company files rates for the transportation of natural gas under NGA section 4, the Commission carefully considers those rates to confirm that they are just and reasonable. Additionally, under NGA section 5, the Commission, upon its own motion or a complaint brought by another entity, will review the rates, terms, and/or conditions of a pipeline's natural gas transportation tariff and contracts to consider whether the rates are just and reasonable.

Since 2009, the Commission has instituted ten NGA section 5 proceedings on its own initiative to investigate the rates charged by natural gas pipelines and storage companies to consider whether those rates continue to be just and reasonable. In this way, FERC is proactively protecting consumers, with seven of these cases resulting in lower rates for consumers totaling approximately \$194 million per year.

The Commission has also worked to utilize tools that Congress granted under the Energy Policy Act of 2005 (EPA 2005) to further ensure just and reasonable pipeline rates. For example, FERC has instituted multiple rulemakings to make the data reporting of natural gas pipelines more transparent (e.g., Order Nos. 710, 720, 735). These reports make information about the pipeline's transactions and financials



available to the public, creating transparency and the opportunity for consumers and the Commission to review pipeline rates for over-recovery. Additionally, in EPCA 2005, FERC was granted authority to address market manipulation in the markets that it regulates. Since that time, FERC has increased its market monitoring abilities and brought enforcement actions against those who have engaged in market manipulation. In this way, FERC has helped to ensure that electricity and natural gas markets produce just and reasonable rates for consumers.

**2. Some have suggested that one way to address the issue would be reform of the Natural Gas Act to ensure that customers (after proving that they have been overcharged by interstate pipelines) can receive a refund back to the date of a filed complaint- a change that would give gas customers the same protections afforded under law to electricity customers since 1988. What are your thoughts on this?**

Federal Power Act section 206 provides refunds to electric customers that have been overcharged. However, NGA section 5 currently does not have similar refund authority. I believe it is appropriate to grant the Commission refund authority under NGA section 5. This would be an additional way in which consumer interests could be protected.

FRED UPTON, MICHIGAN  
CHAIRMAN

HENRY A. WAXMAN, CALIFORNIA  
RANKING MEMBER

ONE HUNDRED THIRTEENTH CONGRESS  
**Congress of the United States**  
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2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115  
Majority (201-225-2927)  
Minority (202-225-3641)  
January 10, 2014

The Honorable Tony Clark  
Commissioner  
Federal Energy Regulatory Commission  
888 First Street, N.E.  
Washington, D.C. 20426

Dear Commissioner Clark:

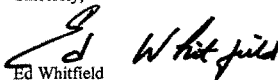
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Thank you again for your time and effort preparing and delivering testimony before the Subcommittee.

Sincerely,

  
Ed Whitfield  
Chairman  
Subcommittee on Energy and Power

cc: The Honorable Bobby L. Rush, Ranking Member,  
Subcommittee on Energy and Power

Attachment

FEDERAL ENERGY REGULATORY COMMISSION  
WASHINGTON, D.C. 20426



*Office of Commissioner Tony Clark*

January 24, 2014

The Honorable Ed Whitfield  
Chairman  
Subcommittee on Energy and Power  
United States House of Representatives  
Washington, DC 20515

Dear Chairman Whitfield:

Thank you for your interest in our work at the Federal Energy Regulatory Commission (FERC), and for providing me with an opportunity to express my views on issues of importance at the FERC. Enclosed are my responses to questions for the record that I received from members of the Subcommittee on Energy and Power.

Sincerely,



Tony Clark

**Answers of Commissioner Tony Clark to Questions for the Record**

**The Honorable Ed Whitfield**

**1. Commissioner Clark, in specific FERC Order 1000 “compliance filing” orders you have raised some serious concerns about potential downsides of the Commission’s implementation of Order 1000. Please describe these concerns, and in particular the implication for consumers?**

Answer: As I indicated at the hearing and as I have noted in a number of the separate statements I wrote with respect to certain Order No. 1000 compliance filings, there is a good portion of Order No. 1000 I can support. Encouraging utilities to engage in greater regional and interregional planning to ensure that the transmission grid is robust and not balkanized makes good sense. So, too, do efforts aimed at ensuring more certainty in cost allocation principles.

I have disagreed with the Commission’s implementation of Order No. 1000 when I believe the Commission has gone beyond the confines of the Federal Power Act, by declining to permit utilities to take into planning considerations certain other federal, state, and local laws and regulations which the utility is obligated to follow. At best, this can be seen as a clumsy way to implement a federal directive, for it places individual utilities in a difficult position when attempting to reconcile the various laws with which it must comply. At worst, it can be interpreted as a jurisdictional power grab by the Commission that is not supported by the Federal Power Act itself. Effectively, the Commission may be saying that it will arbitrarily support and recognize only those public policies with which it finds favor; certain states’ renewable portfolio mandates apparently being at the top of the list. Yet the Commission has declined to allow a utility to recognize for planning purposes other equally valid laws that determine how and why utility infrastructure is planned and constructed.

Beyond these questions I have raised regarding this approach, my separate statements have also identified practical implications for consumers that I find troubling. By declining to permit a utility to recognize all of the laws with which it must comply, utilities may be forced to expend consumer dollars on developing projects that have little or no hope of being constructed. Not only is this an inefficient use of resources, it can delay projects, perhaps even projects needed for reliability. Also, regions of the country that might benefit from increased planning are denied that opportunity because certain non-jurisdictional utilities will simply walk away from an inflexible FERC process.

**2. Should behind-the-meter generation be treated as a demand response resource or a generation resource? What is the justification for treating behind-the-meter**

**generation differently from traditional generation in terms of how it is compensated in the market, and the accountability to deliver as promised?**

Answer: Inherently, there is no difference between the electrons supplied by a behind-the-meter generator and those provided by traditional generators located on the transmission grid in front of the meter. Nevertheless, a gray area arises for these resources due to their impact on the wholesale electricity markets that the FERC regulates.

Under the Federal Power Act, the Commission is charged with ensuring that rates for wholesale sales of electric energy in interstate commerce are just, reasonable, and not unduly discriminatory. As a result, our lens is necessarily focused on the wholesale markets. Behind-the-meter generators, while on the retail side of the meter, can be used by customers as a substitute for purchases from the wholesale markets. When a customer makes this substitution, they can effectuate a net decrease in their load, thereby decreasing the amount of demand on the transmission system. This action equates to a load reduction in the wholesale market, despite the fact that it was facilitated by a generator. This regulatory classification of behind-the-meter generation as demand response is, however, relatively benign but for the imposition of an overly generous compensation scheme for demand response in the wholesale markets.

Prior to my arrival at the FERC, the Commission issued a controversial decision requiring Regional Transmission Organizations and Independent System Operators to compensate demand response resources at the locational marginal price (LMP) in certain circumstances. Referred to as Order No. 745, this rule change enables demand response resources to be compensated at the same level as supply resources such as traditional generation. I've dissented from Commission orders involving the implementation of Order No. 745 to highlight my disagreement with this policy. Demand response in the wholesale markets is simply a reduction in consumption; it should not be characterized as a supply resource. Doing so ignores the real savings that accrue to customers providing demand response, which leads to overcompensation and distorted market signals to the detriment of traditional supply resources.

These larger policy issues are currently being litigated in *Electric Power Supply Association, et al. v. FERC*, where parties petitioned the D.C. Circuit Court of Appeals on whether the Federal Power Act permits the Commission to set compensation and other market rules for demand response resources participating in organized wholesale energy markets. In the meantime, if demand response resources are going to be treated like supply resources in terms of compensation, I believe they should be held to similar deliverability standards as traditional supply resources.

**3. You've been critical of FERC's recent enforcement action against state PUCs. Do you agree that, under the construct of PURPA, Congress reserved authority to the state PUCs to set avoided cost rates and order the purchasing utility to enter into contracts for the purchase of energy (while being consistent overall with broad FERC regulation)?**

Answer: I concur with that plain reading of the statute. The concerns I have previously expressed related to what I felt was an imprudent exercise of FERC discretion in breaking precedent that had held that the Commission would make determinations on PURPA cases that were brought to it, but not go so far as to itself sue a state on behalf of a private project developer. I am pleased to note that the issue that brought this to a head has recently been settled by FERC and the State of Idaho in a way that is acceptable to both parties. I am hopeful that in future cases, FERC can avoid such litigation by returning to its previous practice.

**The Honorable John Shimkus**

**1. Are you aware that the United States Military Academy (USMA) at West Point is at capacity for electric power and how would you describe this situation?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**2. Has the transmission system at USMA been substantially upgraded since the 1970s?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**3. What are the expected improvements for a typical transmission system that is 40 years old?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**4. Is there a general calculation used by utilities to forecast demand increase that would drive the upgrade of infrastructure?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**5. Is the age of the transmission system supporting USMA a concern?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**6. Are utilities obligated to provide power requisite with current and future demand?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**7. Who is responsible for the funding of upgrades?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**8. Are utility companies obligated to submit master plans or capital improvement plans? If so, what has been submitted with regard to USMA?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**9. How does USMA's electric energy use affect the neighboring communities, such as Highland Falls and Fort Montgomery?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**The Honorable Michael C. Burgess**

Commissioners, I join many of my colleagues who are concerned about a growing trend within Federal agencies to expand their jurisdiction without being given the authority by the Congress. Just because some long time government employee or employees may be predisposed one way or another, we are a nation of laws and even agencies are not exempt from the limitations placed on them by statutes we have passed that give them their jurisdiction.

There seems to be a good deal of uncertainty as to how FERC and DOE are regulating natural gas and natural gas export and exactly what "natural gas" is. I hope that, as new processes for recovering, transporting and storing hydrocarbons are developed, FERC and DOE will adhere to a strict construction of the statutory definition and not try to reach out and regulate products which are liquid, like LPGs, or which are specially manufactured to meet customer needs. Do you agree that we should interpret the law wherever possible in ways which minimize regulatory impediments?

Answer: In all areas of Commission activity, I believe it should faithfully interpret and administer the laws as written and in a way that does not inappropriately expand Commission jurisdiction or regulation beyond what is provided for in the law.

**The Honorable David B. McKinley**

At our hearing on December 5th, we discussed the definition of "natural gas," the application of that definition to Natural Gas Liquids and the effect of that application on new "solution" technologies which produce liquid mixtures of selected natural gas and NGL constituents. I understand that these mixtures are similar in characteristics to LPG but can be effectively used to capture and transport any or all of the gas constituents that

come out of the wellhead. As I noted, this technology can be extremely useful in capturing and recovering the significant volume of gas that is currently being flared in West Virginia and in alleviating the glut of certain gas constituents like ethane that currently exists in our region.

It is my understanding that the deployment of this technology in my state and others (Mr. Hall raised similar issues in his questioning) is being delayed by uncertainty as to whether FERC and DOE will treat this new mixture of gas and NGL constituents as a liquid like LPG and thus not subject to export controls and other regulatory strictures applicable to "natural gas" or, in the alternative, whether the natural gas definition will be stretched to cover this new technology and delay its implementation. I was heartened by the Chairman's assurance that there are no plans to redefine natural gas under the Natural Gas Act but would like answers to the following questions in order to resolve the uncertainties which are currently impeding the deployment of these new technologies.

1. My understanding is that both DOE and FERC have historically concluded that NGLs such as Propane, Ethane and LPG are not "natural gas" and may be produced, transported and exported without being subject to the facility siting and other regulatory restrictions which apply to natural gas. Are you aware of any policy reason for deviating from this approach and regulating either NGL facilities (particularly those other than pipelines) or the transportation and use of NGLs in a manner different than that which has been historically followed? Hasn't the current approach been essentially problem free? Is there any reason to expand jurisdiction and move into an area which has been problem free?

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

2. As a matter of policy, should the mixtures created by new technologies which alter LPG, by incorporating into it additional hydrocarbon constituents found in wellhead gas, be treated like LPG, to which it is most similar in characteristics, or like pipeline quality natural gas, which is subject to regulation by FERC and DOE? Shouldn't it be our policy to minimize regulatory interference with business decisions where there is no demonstrated need for regulation?

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

3. As a matter of law, how can it be determined that a process which mixes various constituents of wellhead gas, including Methane, into Propane and other NGLs to create a mixture of natural gas and natural gas liquids which is similar in characteristic to LPG, is either "natural gas unmixed" or a "mixture of natural and artificial gas" within the meaning of the Natural Gas Act of 1938.

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.



As I indicated at the hearing, uncertainty regarding these issues is delaying deployment of important new technologies which can be of great import in preventing waste and environmental harms while, at the same time, creating jobs and helping West Virginia's economy.

**The Honorable Jerry McNerney**

1. In California, we have a number of statutory and regulatory requirements that not only require development of new generation, but also the type of new generation. Is it the Commission's intent to let the ISOs (or in our case the States) lead in deciding whether capacity markets are necessary and, if so, to design them to reflect the unique features of the relevant market?

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

2. My understanding is that some of the current capacity markets require local utilities to buy from the market. Public power utilities in Northern California just built a highly efficient and clean gas plant in my district. Will they be able to utilize this resource and self-supply, rather than being forced onto the market?

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

3. There has been recent discussion about whether FERC might push for lower returns for transmission investment. Can you comment on what you see FERC's role being at this time in providing a clear, consistent market signal for the transmission investment that this Committee has believed to be important for a number of years?

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**The Honorable Eliot L. Engel**

The Commission has been focused on implementing policies which provide significant advantages to demand response resources relative to traditional generation, presumably because of their superior environmental impact. Yet, in some areas up to 1/3 of this demand response isn't the type use reduction and demand side management we normally conceive of when we're talking about demand response. Instead, a great deal of this actually appears to be load shifting rather than demand reduction and the load is being shifted from low emitting generation sources to inefficient, diesel-fueled, backup generators, that don't have environmental controls.

**1. How is this consistent with the purported environmental benefits DR is supposed to bring?**

Answer: I agree with Acting Chairman LaFleur that the Federal Power Act does not put the FERC in charge of administering environmental regulations. Nonetheless, I am aware of the issue you have raised. And while the FERC did not establish these environmental rules, our regulations do incentivize participation in demand response programs.

In Order No. 745, the FERC established regulations requiring Regional Transmission Organizations and Independent System Operators to compensate demand responses resources at the full locational marginal price (LMP) in certain circumstances. As I have previously stated, I disagree with the level of compensation established in this rulemaking and believe it inappropriately subsidizes entities that already have an incentive to curtail load, including those that have previously invested in behind-the-meter generators.

As mentioned by Acting Chairman LaFleur, environmental regulation is an arena reserved for the jurisdiction of the states and the EPA. However, I would be remiss if I did not also highlight the potential for FERC jurisdiction to intersect with the enforcement of environmental regulations. Audit staff in the FERC's Office of Enforcement ensures that market participants are in compliance with RTO/ISO tariffs and the Commission's regulations, which can include an analysis of environmental compliance to the extent that such compliance is linked to a FERC-regulated tariff.

For example, market participants that are providing demand response through participation in the New York wholesale market must sign an agreement with the New York Independent System Operator (NYISO) confirming their compliance with all federal, state and local laws, rules and regulations. In a January 2012 audit report, FERC's Office of Enforcement described how a market participant did not ensure that all of its distributed assets had obtained proper New York State Department of Environmental Conservation Air Facility Registration Certificates prior to enrollment in one of NYISO's demand response programs. The audit report also described how this market participant had incorrectly registered a generator in an ISO New England demand response event, and as a result, the distributed generator operated and released emissions outside of the scope of its permit. The audit report directed the market participant to take corrective actions to strengthen its internal processes, procedures, and controls to ensure that all customers with distributed generation follow applicable federal, state, and local certifications to be qualified to participate in demand response programs.<sup>1</sup>

**A second problem seems to be that when this bundled demand response commits to provide system reliability 3 years ahead of time, it simply does not show up when it is needed.**

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<sup>1</sup> See Final Audit Report, Docket No. PA11-20-000 (January 13, 2012).

**2. What is the Commission doing to ensure these demand response resources are real, and are fully committed to meet their obligations for providing system reliability?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it. Any resource that makes a commitment to provide capacity to meet system reliability needs must be held accountable for that commitment in real-time. A heightened awareness is particularly warranted for demand response resources due to the dramatic increase in their participation in wholesale electricity markets in recent years.

I have written separately on prior Commission orders to emphasize the need for demand response resources to meet their performance obligations to ensure system reliability. Specifically, in December 2012, I dissented in a matter where petitioners – many representing demand response resources in New York -- argued they should receive payment for demand response they could not provide in real-time.<sup>2</sup> I believed the language in the NYISO tariff was clear, but the Commission granted the complaint, in part, and directed NYISO to revise its tariff to include language that “reflects more clearly” that behind the meter generation that cannot reduce load at the NYISO’s direction (because it is entirely dedicated to serving a local power need) is incapable of providing emergency demand response. Notwithstanding my dissent in the *Energy Spectrum* matter, I am pleased to say that the Commission is actively monitoring the markets to ensure that facilities registered as demand response resources are real and committed to perform when called.

In sum, I share your concerns and support adequate metering and reporting requirements for demand response resources to ensure that system operators and the Commission have visibility into resource availability and performance.

**The Honorable Gene Green**

The liquefied petroleum gas (LPG) industry is an important component of the Texas oil and gas industry. In Texas, the Railroad Commission administers and enforces state laws and rules related to LPG, while the Environmental Protection Agency is responsible for oversight and regulation of emissions and clean air standards, and the U.S. Department of Transportation regulates some aspects of transportation.

1. New technologies have now entered the marketplace for producing LPG-like products, called Compressed Gas Liquids that are customized blends of gas and gas liquids. How can we ensure that these new Compressed Gas Liquids products and facilities are similarly regulated to the LPG industry?

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

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<sup>2</sup> See *Energy Spectrum, Inc.*, 141 FERC ¶ 61,197 (2012) (order on complaint and directing compliance).

**The Honorable Mike Doyle**

**Manufacturing companies argue that they are overpaying for natural gas as a result of interstate pipeline rates. FERC needs to assure consumers that pipeline companies are charging a "just and reasonable" rate as required under the Natural Gas Act.**

**1. What is FERC doing to ensure that consumers are not overcharged?**

Answer: I have reviewed the response submitted by Acting Chairman LaFleur and concur with it.

**The Natural Gas Supply Association conducts a study every year using Form 2 data that pipelines are required to file with the FERC. The latest report indicated that that pipelines are overcharging by \$3.4 billion. This seems to be a problem in the sense that these dollars are coming from consumers.**

**2. Some have suggested that one way to address the issue would be reform of the Natural Gas Act to ensure that customers (after proving that they have been overcharged by interstate pipelines) can receive a refund back to the date of a filed complaint- a change that would give gas customers the same protections afforded under law to electricity customers since 1988. What are your thoughts on this?**

Answer: The issue you have raised is related to what is known as "regulatory lag." That is to say, when a regulated utility of any type is either over-recovering or under-recovering, there can be a period of time during the pendency of a rate case where the utility either continues to recover through rates more than it should, or recover less than it should. As a general matter, extensive lag in either instance is generally frowned upon as a matter of sound regulatory practice. There are a number of tools available to policy makers to deal with this.

As you noted in your question, when it comes to electric utilities, the Federal Power Act provides a mechanism to help address this issue of regulatory lag. In the case of the FPA, the Commission has authority to set new rates subject to refund and/or set a refund applicability date so that regulatory lag is mitigated, regardless of whether it is filed under Section 205 or 206.

The Natural Gas Act is structured differently. Under it, when a utility files a Section 4 rate case, most often because it believes it is under-recovering, the Commission establishes a new rate, subject to refund, that the utility may begin charging before the case is concluded. Yet when a separate entity or the Commission itself brings a Section 5 complaint alleging over-recovery by the pipeline, the new rates only go into effect after the conclusion of the case. In other words, regulatory lag in the instance of a potentially over-recovering interstate gas pipeline is not addressed.

Shippers and others have complained that this discourages over-earning pipelines from settling Section 5 rate cases in a timely manner. The interstate pipeline industry has argued the structure

of the NGA was considered by Congress and so determined to address perceived unique characteristics of the interstate pipeline industry itself.

For my part, I fully understand these are policy questions to be resolved by Congress. I would note however, that the existing framework of the NGA does create an asymmetry in regulation. As I indicated, under the NGA, regulatory lag is only addressed in instances when a pipeline is potentially under-recovering. There could be a number of ways to address this asymmetry, so without prejudging any particular piece of legislation, I will simply say that I believe this is a worthy topic of consideration for Congress.